HARMONY,

ANALYTICAL AND APPLIED

George A. Leighton

HARMONY

ANALYTICAL AND APPLIED

A Practical Text-Book
for Teachers, Schools
and Conservatories

By

GEORGE A. LEIGHTON





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To

Wanda and Chalmers Clifton

In Appreciation

To acknowledge the services rendered by my colleagues, Miss Mildred Eakes and Miss Mary Sims, is a small recognition of their coöperation during the past several years in planning, experimenting with and developing the features of this text. For this, for their suggestions and criticisms and for the many hours expended by them in correcting manuscript and proof-matter and proving the practicability of the exercises, I am gratefully theirs,

George A. Leighton.

HARMONY, ANALYTICAL and APPLIED

INTRODUCTION

As it concerns the great majority of music students, Harmony purposes to equip them for the understanding of the composition they play or sing. It strives to make the musical score as intelligible to the eye and mind as any printed poem or story is to the silent reader who knows its language.

With this as the end in view, a text-book on harmony must justify itself by correlating its theories and principles with actual musical practises. It may not be so simplified—so denuded of essentials and truths—as to breed the conviction that standard compositions are full of mistakes and heresies permitted only the composers. Finally, being concerned with the intellectual phases of music, it must assume that the pupil has an intellect and is able to exert it.

With the fulfillment of these conditions as a sole basis for publication, the author of this volume could hardly claim exclusiveness. Nor does he claim basic patents on any one particular detail. He is inclined to believe, however, that merit and novelty exist in the aggregation of the following features:

The first section is sufficiently detailed to make a separate text on "Theory" unnecessary.

A single voice-line is dealt with first—then two voices in combination (Simple Counterpoint, First Species) and finally four voices.

The lessons are brief and, in the first half of the book, but one detail is considered at a time.

The lessons have "vocabularies"—short melodic patterns admitting of conventional chord-groups. Drill is given in these "words" before they are used in the "sentences" or complete exercises.

Concentration is forced on tonality by the early use of modulation, chromatic and enharmonic alterations, and the association of tones and chords in all the keys in which they might be found.

Conventional rules are presented in their proper places but all reasonable exceptions and practises found in pre-modern compositions are permitted the student. More than customary freedom is conceded in the use of consecutives, resolution of dissonances, space between and crossing of voices, melodic leaps, etc.

Analysis is an integral part of the text. The entire chord material and melodic ornamentations are presented analytically before the actual technic of their practical application is begun.

An applied feature is the transcription of musical scores into four-part harmony.

A great quantity of figured basses, melodies to be harmonized and melodic patterns gives choice and variety in exercise material.

No new terms have been coined nor antiquity ransacked for the revival of obsolete ones. The author's recognition of and respect for several comprehensive texts justly considered as standard is a sufficient reason, if no other existed, for the avoidance of that which might prevent correlation.

The order in which the material appears is characteristic and an effort has been made to prevent isolation of such commonplace details as chromatic alterations and altered chords. The latter, for instance, are introduced before their unaltered forms.

In conclusion it might be stated that this book is not put forth experimentally. That stage has been passed through by the author and his assistants in their own classes and literally thousands of pupils have helped in its development.

SUGGESTIONS FOR STUDY

The first 24 lessons might be congested into fewer assignments if circumstances warrant. With the remainder of the text it will be advisable to take a first course through, using the simpler exercises of each lesson, leaving the more difficult ones for review.

Let the study of text-matter go hand in hand with the analysis of standard musical works. A volume of Chorales—or Hymns of musical worth—may be followed, in turn, by a Sonatina volume, Schumann's "Album for the Young" and "Scenes from Childhood," the Beethoven Sonatas and collections of romantic and early modern pieces. The transcription work, as outlined on Page 71, should be applied to these compositions.

Keyboard study should consist of the performance of melodies from scale-numbers, the transposition of melodies, harmonization of given basses and melodies, transposition of written work, harmonic dictation (the calling for performance of chord-groups in various keys, the teacher giving the Roman numerals or melodic patterns) and the performance of sequences based on given patterns, and modulation according to the various formulæ found in this text.

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HARMONY, ANALYTICAL and APPLIED

LESSON 1

The Musical Alphabet

1. Anything heard is *Sound.*

Tone is musical sound (characterized by features of scientific interest not essential at this time).

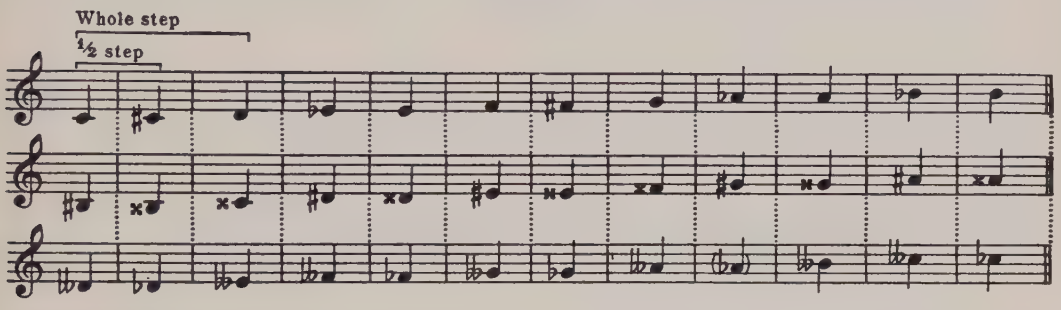
Tone has *Pitch*—being "higher or lower" than other tones.
Quality—being loud, soft, harsh, pleasing, etc.
Duration—being heard for a definite length of time.

2. From infinite possibilities of pitch, twelve tones have been selected as sufficient to answer all musical demands.

These twelve form what is called the *chromatic series;* each tone is a "half-step" higher or lower than its nearest neighbor.

Thirty-five symbols are required to represent these sounds on the printed page.
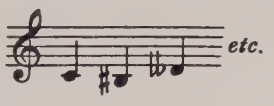
Illustration 1



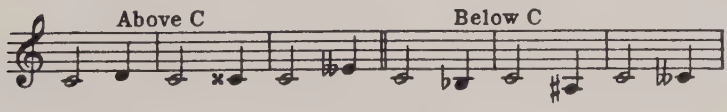
In the above is to be found the notation of the musical alphabet. Observe that G♯ and A♭ have two notations while the rest have three.

3. Tones sounding alike but requiring different notations are *enharmonic* with each other.

Exercise 1. (a) Rewrite Ill. 1 from memory, but in the following manner:



(b) Taking each note of Ill. 1 in turn, write every other note a whole step above and below it. Use the following as a model:
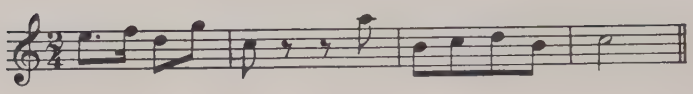


(c) Oral drill:
What two other names has E♭? D♯? etc.
What sound has only two notations?
What is meant by *enharmonic?*
Strike the piano key which sounds G♭♭, C𝄪, etc.

LESSON 2

The C Major Scale

Ill. 2



4. What is seen here is a series of *Notes* which are written symbols of Tones to be produced vocally or instrumentally.

5. A succession of single tones, skilfully selected and arranged successively as to pitch and duration, results in *Melody.*

A fundamental factor attending the selection and arrangement of the tones is their relation to each other. This relation is established by their place in a *Scale.*

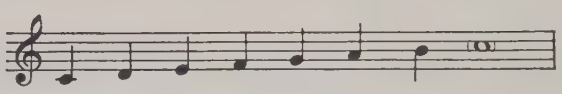
The tones of this melody, in the order of their appearance, are:

E F D G | C A | B C D B | C

Eliminating duplicates:

E F D G C A B

Arranged in alphabetical succession and in an order directed by aural intelligence these letters produce what is called a *Scale.*



6. A *Scale* is a logical alphabetical succession of ascending or descending tones, the first and last of which have the same letter-name.

C is the only tone acceptable to the ear as the beginning and end of this particular scale. It is called the C Major Scale (major to distinguish it from a type to be explained later) and as all the tones of the melody (Ill. 2) are found in this scale it is said to be in the *Key of C.*

Each note of a scale is numbered:

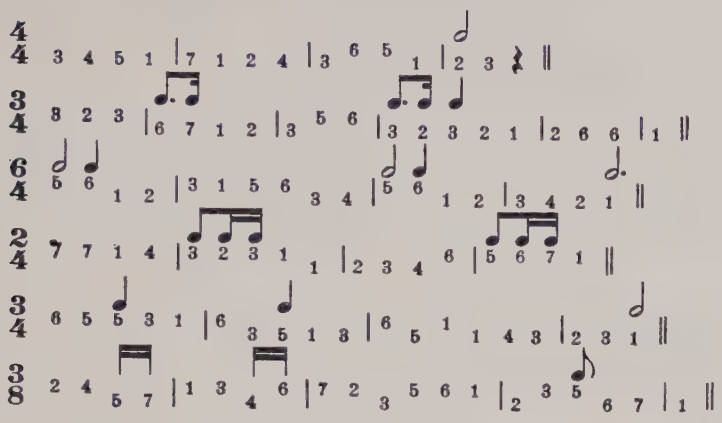
C D E F G A B C
1 2 3 4 5 6 7 1

The melody (Ill. 2), notated in scale-numbers, is:



Exercise 2. Write the following melodies in notes in the key of C. Play them from the scale-numbers.

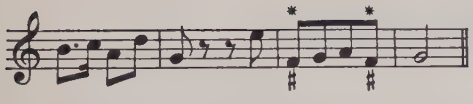
Observe: The note-values and direction taken, up or down, are shown only when doubt might fairly exist. When direction is not indicated take the nearest note of the proper number.



LESSON 3

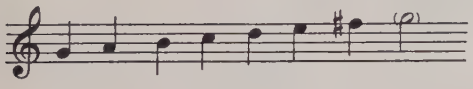
The G and F Major Scales

Ill. 3

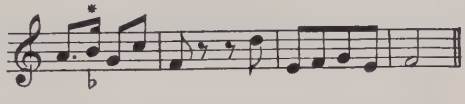


Play. The ear is offended by the F at *. For this melody to sound like Ill. 2, F will have to be sharped.

Assembling the different tones as in Par. 5, the following scale is derived:

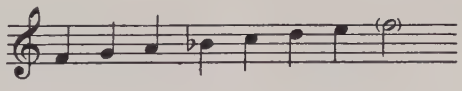


As G is the logical beginning and end, the scale is the G major scale and the melody in the key of G major.



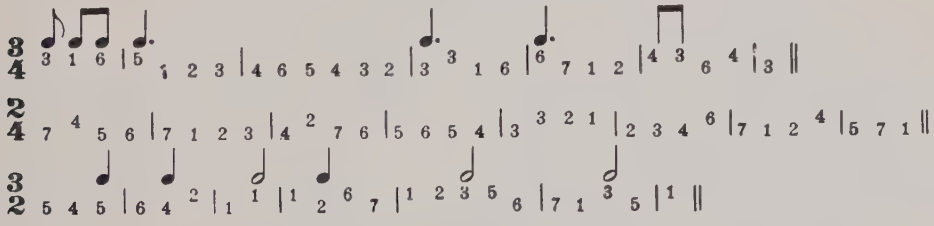
Here the ear demands that B be flatted.

Assembling the tones
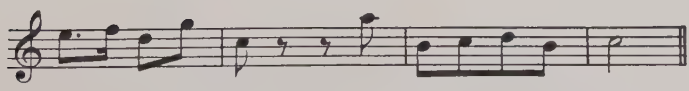


the F major scale is derived and the melody is in the key of F major.

Exercise 3. Write the following melodies in notes in the keys of C, F and G. Play them from the scale-numbers.



LESSON 4

Intervals (General)
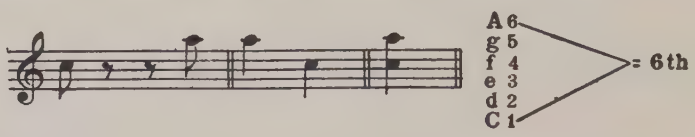


The melody starts on E, moves up to F. Two letters are involved, E and F. The distance covered is called an *Interval* of a 2nd.

From F it moves down to D, skipping over E. Three letters are involved—D, E, F. The interval is a 3rd.

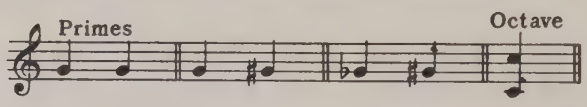
D skips over E and F to G. Four letters, a 4th.

7. An *Interval*, in music, is the visible distance between notes and the audible impression of space when two tones are heard together or successively.

Intervals are calculated by counting the letter-names of both notes and all intervening letters. Count from the lowest to the highest.

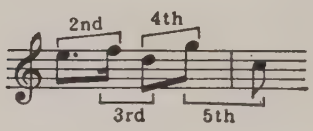


8. Intervals having no visible space are called *Primes*.
Those involving eight letters are called *Octaves*.



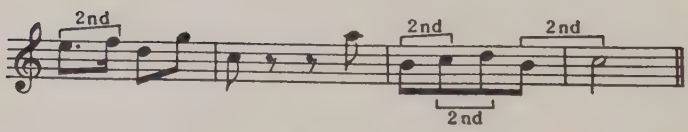
Exercise 4. Name every interval in the melodies of Ex. 2 and 3.

Follow this plan:



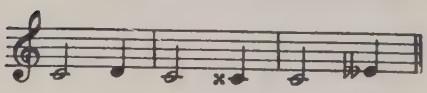
LESSON 5

Major and Minor 2nds



There are four intervals of a 2nd in this melody. One, from C to D, is a whole step. The others are half-steps.

9. A *Major 2nd* is one that occupies a whole step.
A *Minor 2nd* is one that occupies a half-step.



Observe: Each of these is a whole step but only the first is a maj. 2nd. *Why?*

Exercise 5. Find every major and minor second in the work prepared for Ex. 1 and name as major or minor every 2nd marked for Ex. 4.

LESSON 6

Major Scale Pattern

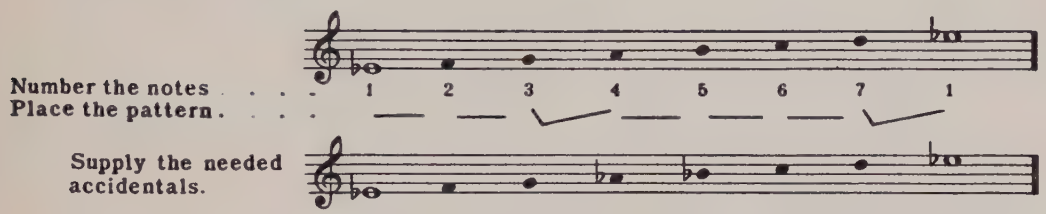
10. Analysing either the C, G or F major scales for its intervals, the following pattern is derived:

	C	D	EF	G	A	BC
	G	A	BC	D	E	F♯G
	F	G	A♭B♭	C	D	EF
Major Scale	1	2	3 4	5	6	7 8

Pattern — — ⌄ — — — ⌄ the — stands for maj. 2nds
the ⌄ stands for min. 2nds

11. In the exercise for this lesson work as follows:

Problem: Write the E♭ major scale.
Solution:
Write the notes



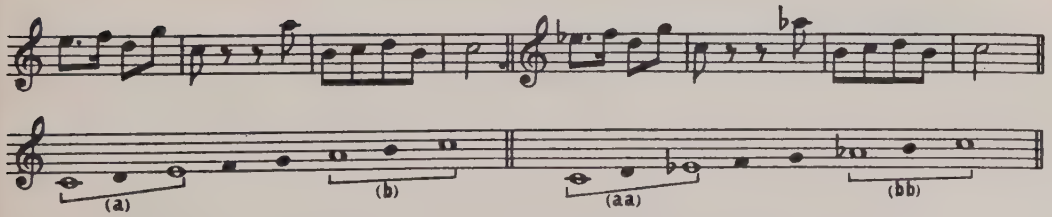
12. Problem: Recite the A major scale.
Think the whole steps and half-steps and say aloud: A, B, C♯, D, E, F♯, G♯, A.

Exercise 6. Write the major scales of B♭, D, E♭, A, A♭, E, D♭, B, G♭, F♯.
Recite these scales.
Say the 6th note of each scale (the scale called at random); the 4th note; the 7th, etc.

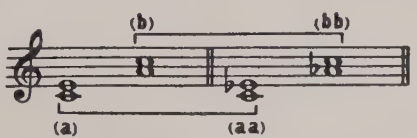
LESSON 7

Major and Minor 3rds

Ill. 4

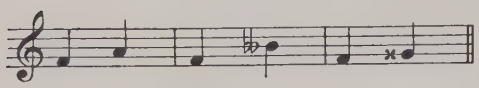


Compare the two versions of the melody and the scales involved.
A distinctive difference is in the size of the 3rds bracketed.



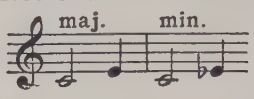
(a) and (bb) occupy two whole steps. (b) and (aa) occupy a step and a half.

13. *Major 3rds* occupy 2 steps.
Minor 3rds occupy 1½ steps.

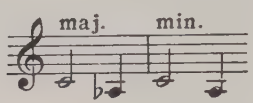


Observe: These all occupy two whole steps but only the first is a major 3rd. *Why?*

Exercise 7. Over each note of Ill. 1, write the notes making intervals of major and minor 3rds.



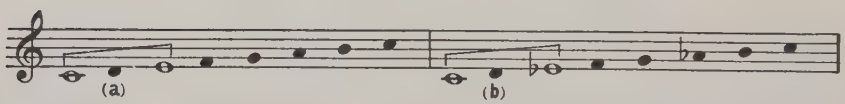
Under each note write the ones forming major and minor 3rds.



Find and name every major and minor 3rd in the melodies of Ex. 2 and 3.

LESSON 8

Minor Scale

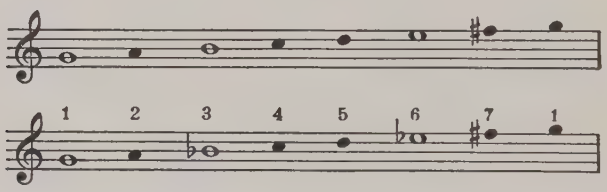


The first scale is *Major* principally because of the major 3rd at (a). The second scale is *Minor* because of the minor 3rd at (b).

Both are C scales: C major, C minor.

14. *Minor Scales* are *formed* by lowering the third and sixth notes of the major.

Ill. 5



15. To lower a note having no accidental use a flat (♭).
To lower one already sharped use a natural (♮).
To lower one already flatted use a double-flat (♭♭).

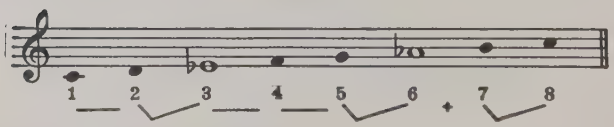
Exercise 8. Make all the scales written for Ex. 6 into minor.

Play alternately C major, C minor: C♯ major, C♯ minor, etc., through all keys.

LESSON 9

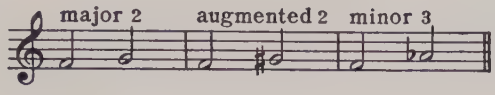
Minor Scale Pattern—Aug. 2nds

Ill. 6



Observe the pattern for the Minor scale.

16. There is a new interval between 6 and 7 marked +.
An *Augmented 2nd* is a half-step larger than a major.
It is the same size as a minor 3rd.



17. The classification of 2nds is now complete:

Aug. 2nds = 1½ steps.
Major 2nds = 1 step.
Min. 2nds = ½ step.

Exercise 9. Write an aug. 2nd above and below every note of Ill. 1.
Recite the minor scales beginning on C, C♯, D, E, F, F♯, G, A♭, A, B♭, B, D♯.
Selecting from these scales at random, say the sixth note, the third, the fourth, etc., of each.

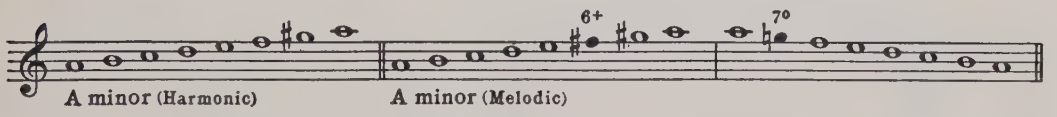
LESSON 10

Melodic Minor

18. The minor scale explained in Lesson 9 is called a *Harmonic Minor* because from it are obtained the tones used in chords ("harmony") of the minor keys. The unique interval of an aug. 2nd was objected to in early music because it was harder to sing than other scale-steps and violated then-existing musical laws. A practical result was the development of the *Melodic Minor* which substituted for the Harmonic when steps 6 and 7 were sung successively.

19. The Melodic Minor chromatically raises 6 of the ascending Harmonic Minor and lowers 7 of the descending form.

Ill. 7



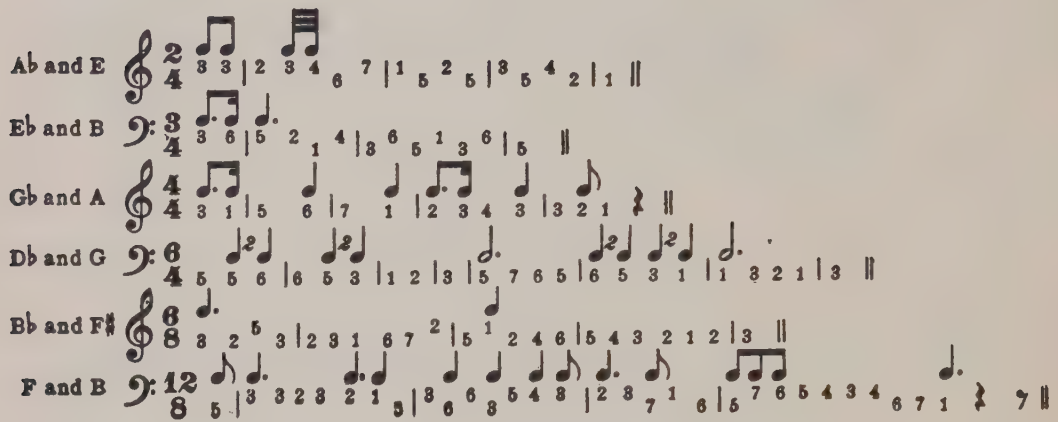
To-day there are two standard scales, the Maj. and Har. Min. There are literally hundreds of natural and artificial scales that have been used or are occasionally used even now. The Melodic Min. is one of the artificial formations and its place is as a detail in a variety of chromatically modified succession of tones. It lost any distinctiveness over a century ago.

20. The alteration of 6 is shown by 6+—a raised 6th degree.
The alteration of 7 is shown by 7°—a lowered 7th degree.

Exercise 10. From the Har. Minors already written, form Melodic Minors —showing both ascending and descending forms.

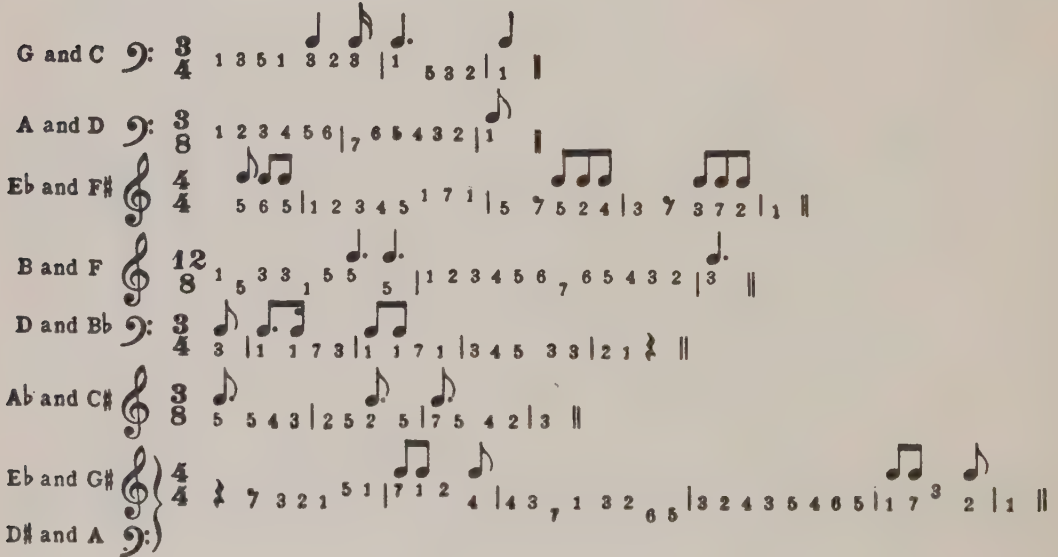
Exercise 11. Write the following in notes in the keys designated. Play them from the numbers.

Major Keys.



Exercise 12.

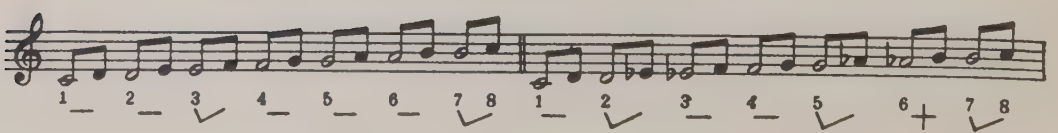
Minor Keys.



LESSON 11

Classification of 2nds

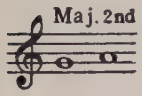
Ill. 8



21. The following chart classifies 2nds as they occur between the different scale degrees.

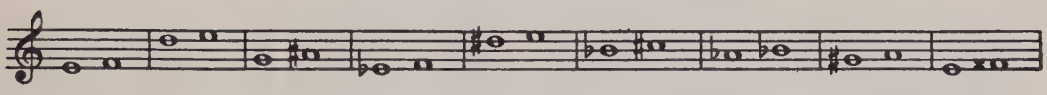
	Maj. Scale	Min. Scale
Maj. 2nds	1 2: 2 3: 4 5: 5 6: 6 7	1 2: 3 4: 4 5
Min. 2nds	3 4: 7 1	2 3: 5 6: 7 1
Aug. 2nds		6 7

22. It follows that as, for instance, there are five maj. 2nds in a maj. scale and three in a min. scale, *any maj. 2nd* may belong to five maj. scales and three min. scales.



Maj. Scales—1 2 of G: 2 3 of F: 4 5 of D: 5 6 of C: 6 7 of B♭
Min. Scales—1 2 of g: 3 4 of e: 4 5 of d:

Exercise 13. Analyse the following as maj., min. or aug. 2nds and classify each in its various scales.
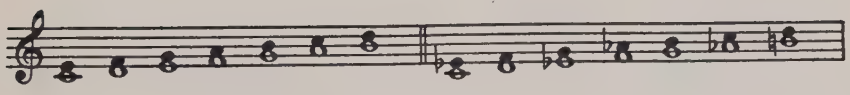


Other 2nds may be selected at random and classified.

LESSON 12

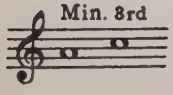
Classification of 3rds

Ill. 9



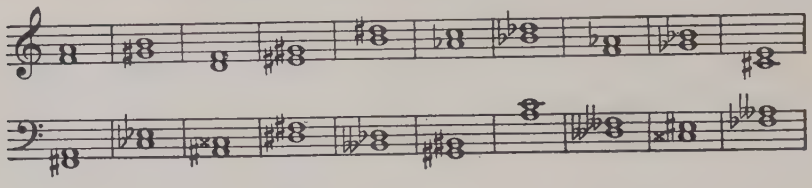
23. Maj. and min. 3rds, found in the major and minor scales, are shown in the following chart.

	Maj. Scale	Min. Scale
Maj. 3rds	1 3: 4 6: 5 7:	3 5: 5 7: 6 1
Min. 3rds	2 4: 3 5: 6 1: 7 2	1 3: 2 4: 4 6: 7 2



Maj. Scale—G 2 4: F 3 5: C 6 1: B♭ 7 2
Min. Scale—a 1 3: 2 4: e 4 6: b♭ 7 2

Exercise 14. Classify each of the following 3rds in its various keys. Other 3rds may be selected at random.



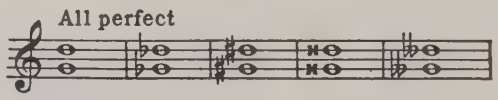
LESSON 13

Intervals—Perfect Group

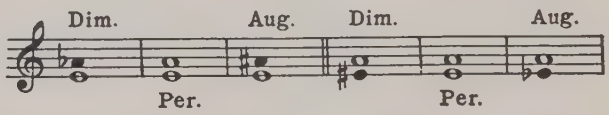
24. Intervals of the 2nd and 3rd have been explained as being major, minor, etc. Primes, 4ths, 5ths and 8ves are either Perfect, Imperfect (Diminished) or Augmented.

All primes, 4ths, 5ths and 8ves show themselves to be Perfect if both notes of the interval are without accidentals or have the same kind of accidental. (*Except B to F* and *F to B.* See Par. 27.)

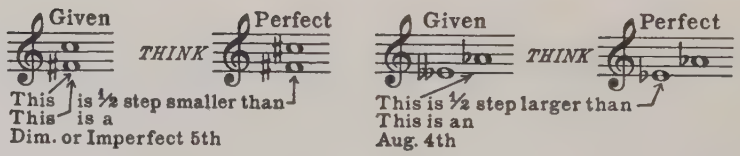
Ill. 10



25. A Perfect interval can be made larger or smaller.
If larger by a half-step it is *Augmented.*
If smaller by a half-step it is *Imperfect* or *Diminished.*



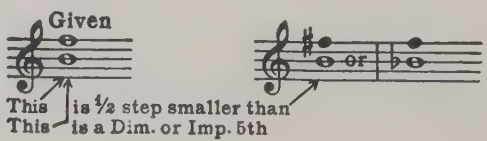
26. To determine quickly an interval of this group (Primes, 4ths, 5ths, 8ves):—
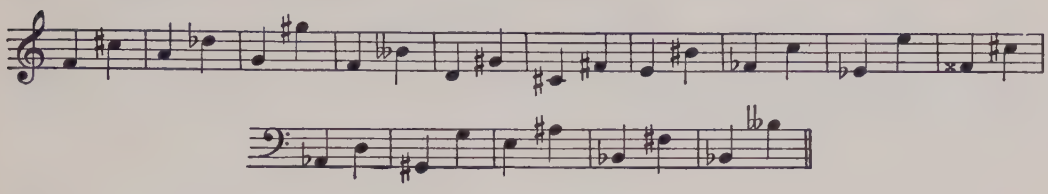


27. In the case of B-F or F-B, either one of the notes must be a "piano black key" for the interval to be Perfect.



Applying the method of Par. 26 to these notes.

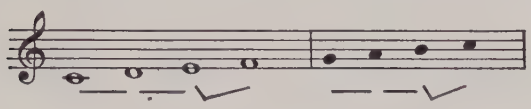


Exercise 15. Name the following:



LESSON 14

Scales—In Circles of 5ths and 4ths

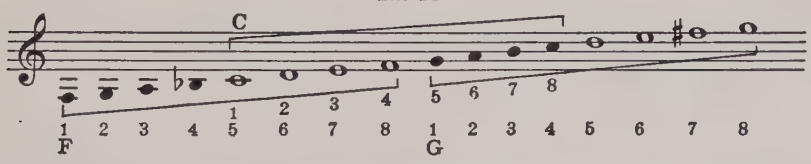


28. Observe that the first four notes of a major scale exactly correspond in intervals to the last four.



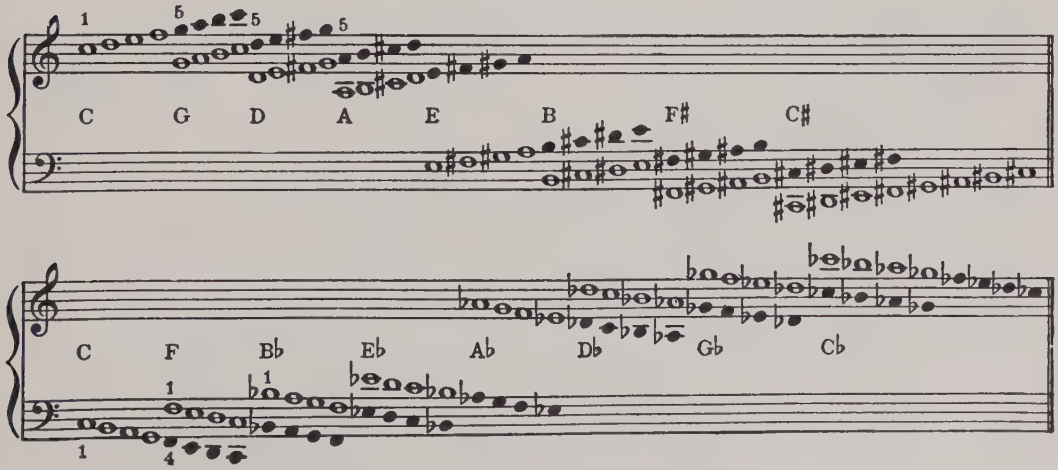
This suggests that each half could be the first half of one scale and the second half of another.

Ill. 11



29. The 4th and 5th notes of one scale are 1st notes of new scales. The following illustration develops this idea, showing that, starting from C, the 5th note of each scale is the 1st of the following one of a series using sharps, while the 4th note of each is the 1st of the next in the series using flats.

Ill. 12



30. As a matter of fact, the natural order of scales is in a series of perfect 5ths:

C G D A E B F♯ C♯ G♯ D♯ A♯ E♯ B♯

but after C♯ certain complications of notation occur, so the flat scales enharmonic with them are substituted:

C	G	D	A	E	B	F♯	C♯	G♯	D♯	A♯	E♯	B♯
						G♭	D♭	A♭	E♭	B♭	F	C

This series is described as the "circle of 5ths" because, starting from any letter, it returns to the enharmonic equivalent of that letter with the twelfth 5th.

Reversed, it becomes a "circle of 4ths":

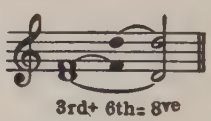
C	F	B♭	E♭	A♭	D♭	G♭	C♭	F♭	B♭♭	E♭♭	A♭♭	D♭♭
					C♯	F♯	B	E	A	D	G	C

Exercise 16. Recite with fluency the circles of 5ths and 4ths.

LESSON 15

Intervals—Inversions—Classification of 4ths and 5ths

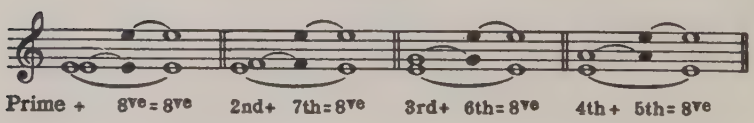
31. The complement of an interval is another which, added to the first, completes the 8ve.



The complementary interval is called the *Inversion* of the first; it is the first interval "upside-down."

The complement of a Prime is an 8ve
2nd is a 7th
3rd is a 6th
4th is a 5th
} and vice versa.

Ill. 13



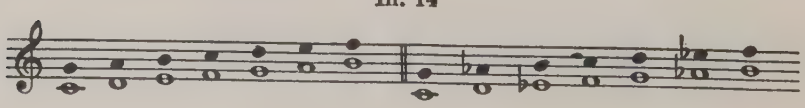
Note the paradox: in mathematics 2+7=9. In intervals: a 2nd plus a 7th = an 8ve. Why the difference?

32. When *Inverted:*

Perfect intervals remain *Perfect.*
Major " become *Minor.*
Minor " " *Major.*
Dim. " " *Aug.*
Aug. " " *Dim.*

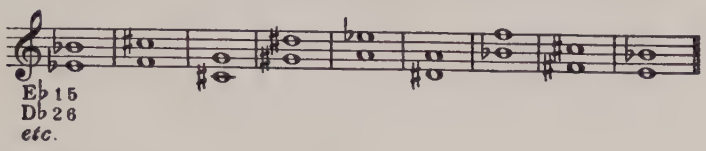
33. *Classification of 5ths.*

Ill. 14



	Maj. Scale	Min. Scale
Per. 5ths	1 5: 2 6: 3 7: 4 1: 5 2: 6 3	1 5: 4 1: 5 2: 6 3
Dim. 5ths	7 4	2 6: 7 4
Aug. 5ths		3 7

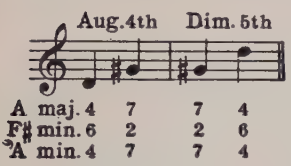
Exercise 17. Classify the following as in Ex. 13 and 14.



34. *Classification of 4ths.*

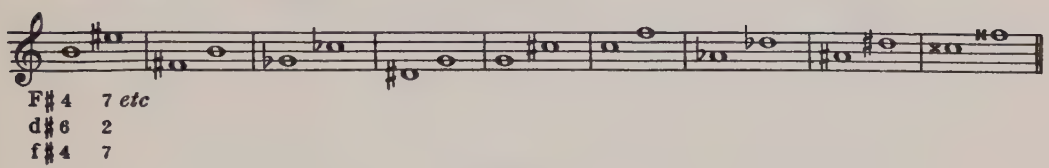
Rather than further complicate the classification of intervals with more charts, the 4ths may be reasoned as follows:

Mentally invert the 4th to a 5th, reverse the scale-numbering and then work from the Chart of 5ths.



As a Dim. 5th it is—Maj. scale 7 4: Min. 2 6 and 7 4.
As an Aug. 4th it is—Maj. scale 4 7: Min. 6 2 and 4 7.

Exercise 18. Classify the following:



LESSON 16
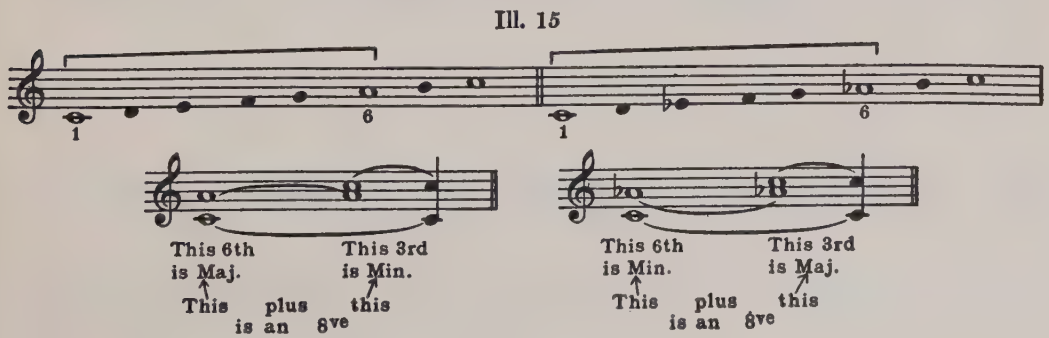
Intervals—6ths

35. Another difference between the major and minor scale is the interval from 1 to 6.

Major scale: 1 to 6 is a *Major 6th.*

Minor scale: 1 to 6 is a *Minor 6th,* a half-step smaller than a major 6th.

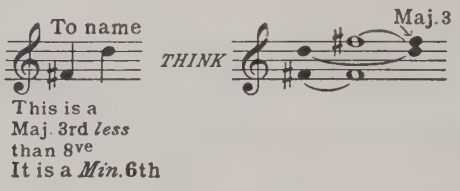
Ill. 15



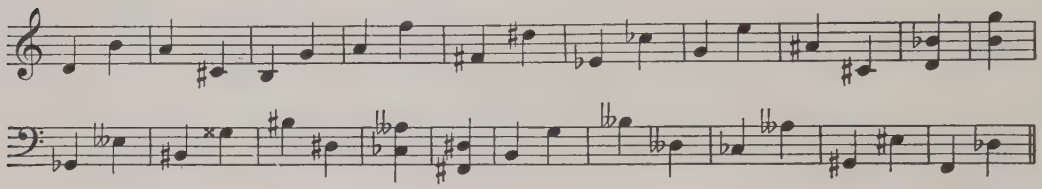
36. From Ill. 15 is deduced:

A Maj. 6th, inverted, becomes a Min. 3rd
A Min. 6th, inverted, becomes a Maj. 3rd } and vice versa.
A *Major 6th* is a minor 3rd (1½ steps) *less* than an 8ve.
A *Minor 6th* is a major 3rd (2 steps) *less* than an 8ve.

37. To reckon 6ths:



Exercise 19. Name the following as maj. or min. 6ths:
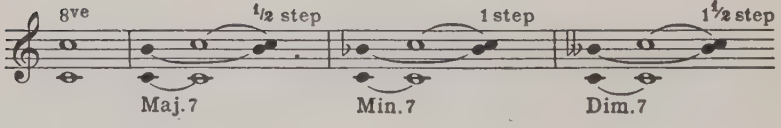


LESSON 17

Intervals—7ths

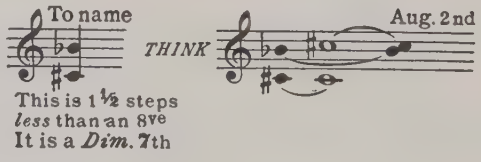
38. The interval from 1 to 7 of any scale (major or minor) is a *Major 7th.*

As 7 is a half-step under 1, it follows that:
a *Major 7th* is ½ step (min. 2nd) *less* than an 8ve.
a *Minor 7th* is 1 step (maj. 2nd) *less* than an 8ve.
a *Diminished 7th* is 1½ steps (aug. 2nd) *less* than an 8ve.

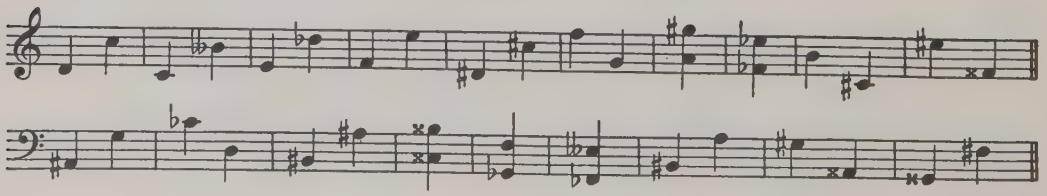
Ill. 16



39. To reckon 7ths:



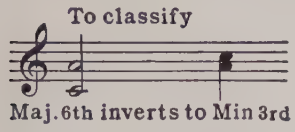
Exercise 20. Name the following:



LESSON 18

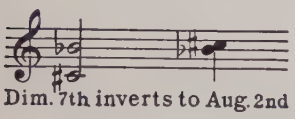
Classification of 6ths and 7ths

40. To classify 6ths, mentally invert them to 3rds: use *Chart* of Lesson 12, reversing the scale-numbers.



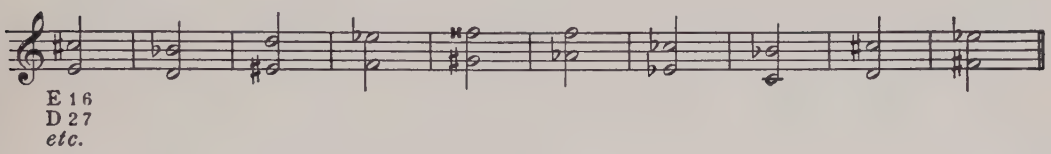
As a min. 3rd it is maj. key G 2-4: F 3-5, etc.
As a maj. 6th it is maj. key G 4-2: F 5-3, etc.

41. To classify 7ths, mentally invert them to 2nds: use *Chart* of Lesson 11, reversing the scale-numbers.



As an aug. 2nd it is *d* minor 6-7.
As a dim. 7th it is *d* minor 7-6.

Exercise 21. Classify the following:



LESSON 19

Classification of Scale Degrees

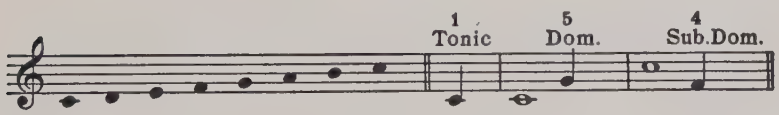
42. Each tone of a scale is given a distinctive name:

1 *Tonic* — Meaning *Tone.*

5 *Dominant* — The chords constructed upon it are most important in defining a key.

4 *Sub-Dominant* — Just as the Dominant is a perfect 5th *above* the Tonic, the Sub-Dominant is a perfect 5th *below* it. Sub-Dom. = "the Dom. *under* the Tonic."

Ill. 17



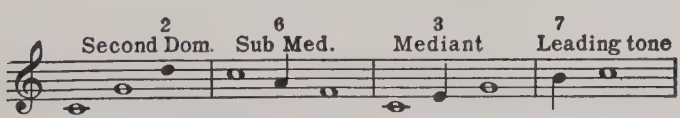
2 *Second Dominant* or *Super-Tonic* — A perfect 5th above the Dom., therefore "the Dominant of the Dominant."

6 *Sub-Mediant* — Midway between the Sub-Dom. and the upper Tonic.

3 *Mediant* — Midway between the Tonic and the Dom.

7 *Leading-Tone* — Leads up to the Tonic.

Ill. 18



The scale degrees are listed above in an order of comparative importance. This will be explained later. The names are applied to the respective degrees

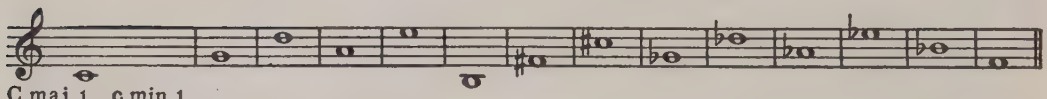
of every scale, major or minor. The first degree of every scale is its *Tonic;* the third degree its *Mediant,* etc.

43. The Tonic, Dominant and Sub-Dominant are classified as the *Principal* scale degrees. The others are *Secondary.*

Memorize the names. The reasons for each may be left until further study makes them understandable.

Exercise 22. Every tone belongs to seven major and seven minor scales. In the exercise below, observe how the first note is labeled and continue in like manner with each of the succeeding notes.

After this has been written, recite the same without reference to the written work.



C maj. 1 c min. 1
B♭ „ 2 b♭ „ 2
A♭ „ 3 a „ 3
G „ 4 g „ 4
F „ 5 f „ 5
E♭ „ 6 e „ 6
D♭ „ 7 d♭ „ 7

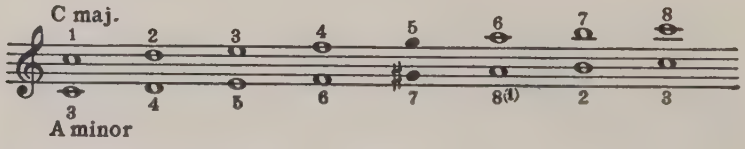
LESSON 20

Relative Minor

44. Keys are related, one to another, according to the number of tones their scales have in common.

The minor scale with the greatest number of tones common to C major is A minor.

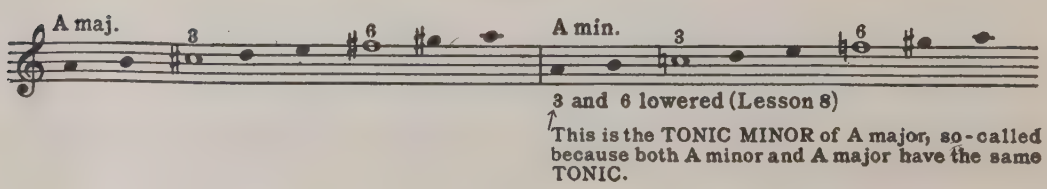
Ill. 19



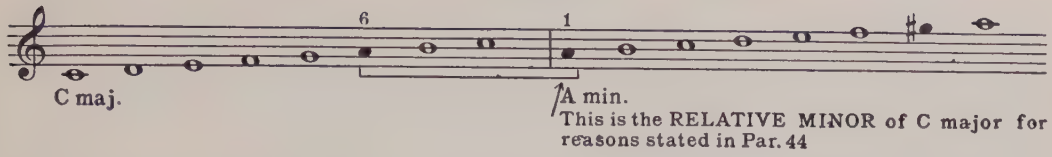
A minor is the *Relative Minor* of C major.
C major is the *Relative Major* of A minor.
6 of a major scale is 1 of its relative minor.
3 of a minor scale is 1 of its relative major.

45. Refer to Lesson 8 and compare the following formations.

Ill. 20a



Ill. 20b



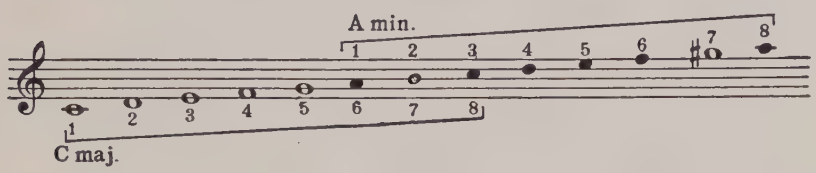
46. It will be noted that every minor scale is both a *Tonic* minor and a *Relative* minor. Inversely, every major scale is a Tonic major and a Relative major.

A min. is the { Tonic minor of A maj. / Relative minor of C maj.

C maj. is the { Tonic major of C min. / Relative major of A min.

47. To form a Relative minor:
Begin on 6 of a major scale and raise (by chromatic sign) 7 of the new scale.

Ill. 21

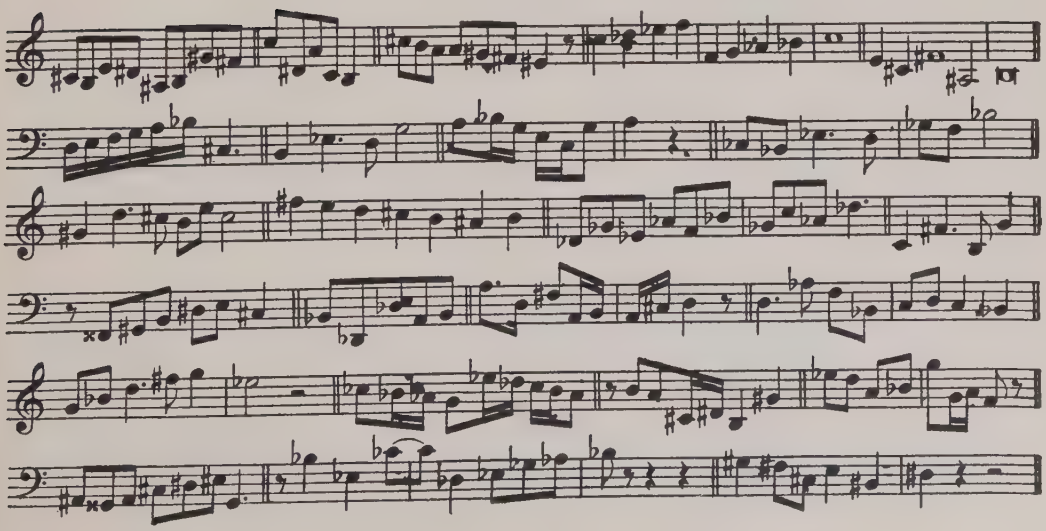


48. Raising the 7 entails the use of the symbols ♯ ♮ and 𝄪.
A double-sharp is used to raise a note already sharped.
A natural is used to raise a note already flatted.

Exercise 23. (a) Write the Relative minor scales of the following majors. Follow the plan of Ill. 21.

B♭ D E♭ A A♭ E D♭ B G♭ F♯

(b) Determine the key and time-signature of each of the following melodies: number the scale-tones:



LESSON 21

KEYS

49. A *Key* is an assembly of tones all belonging to the same scale.

The term *Tonality* is synonymous with *Key*.
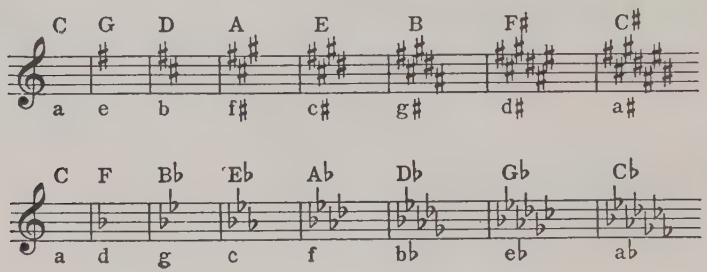
Mode refers to a key being major or minor.

A composition is said to be in a certain *Key:* that is, it begins and ends by using a sufficient number of tones of a particular scale to satisfy the ear that the key is as stated.

50. For convenience, the sharps or flats of the key are grouped into a *Signature* in the order of their first appearance in the scale series.

The following is the natural order of signatures. Note that a major and relative minor use the same signature.

Ill. 22
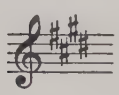


51. To determine the key from a signature:

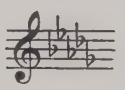
(a) Memorize the sharps and flats in their natural order—

F♯ C♯ G♯ D♯ A♯ E♯ B♯
B♭ E♭ A♭ D♭ G♭ C♭ F♭
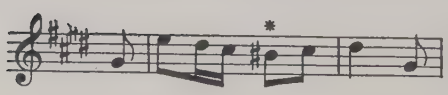
(b) If major, the key is the *next letter* in the alphabet a *half-step* higher than the last sharp of the signature.


Last sharp is D♯
Next letter a half step higher than D♯ is E
The key is E

(c) If major, the key is that of the *second last flat.* The key of F, having but one flat, does not lend itself to this reasoning.


The second-last flat is D♭
The key is D♭

(d) If minor, the raised 7 (Par. 47) will appear early in the composition. Apply the reasoning of (b) or (c) to the signature to find the *Major* key having that signature. The key, if minor, is the *Relative* of that major.



The major key having this signature is E
The B♯ at * is 7 of C♯ minor
The key is C♯ minor

Exercise 24. Write the signature of C♯ D♭ D E F F♯ G G♭ A♭ A B♭ and B major.

Write the signature of C C♯ D D♯ E F F♯ G G♯ A♭ A A♯ B♭ B minor.

Name the key of every illustration in the *Supplement* having signatures. Do the same with available compositions (song books, piano pieces, etc.).

LESSON 22

Active and Inactive Scale-Steps

52. Each scale-tone has its peculiar relation to other tones of the same scale. Certain of them are restful—sufficient. Others demand movement: they are like the first syllable of two-syllable words.

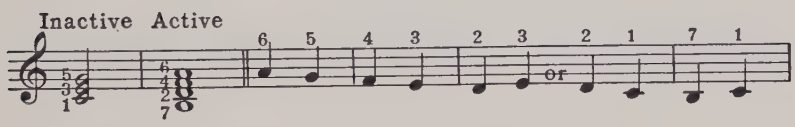
The restful tones are 1, 3 and 5. They are called *Inactive Tones.*

The others, 2, 4, 6 and 7, are *Active* and are limited in their movements.

53. The natural progressions of the *Active* tones are:

6→5; 4→3; 7→8; 2→1 or 2→3;

Ill. 23

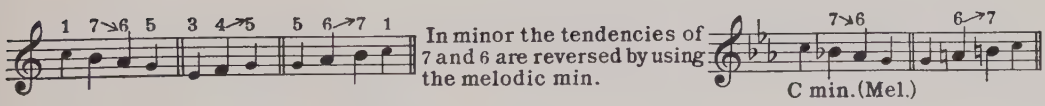


54. There are three elementary rules for the movement of the active tones:

(a) Each progresses to the nearest inactive tone (Ill. 23).
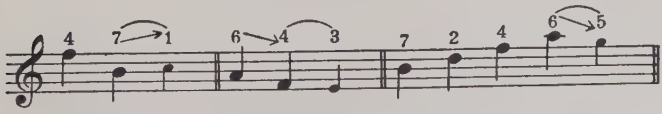
(b) Each may move contrary to its tendency if it and the tones immediately preceding and following are in a straight diatonic line.

Ill. 24



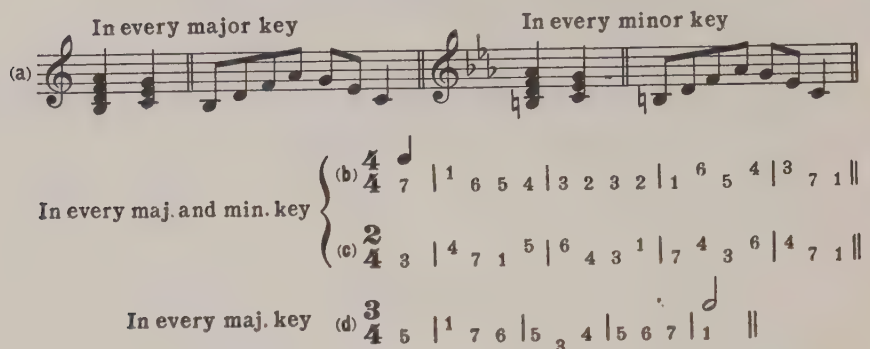
(c) If one active step is followed by another or others equally active, only the last one need follow its tendency.

Ill. 25



Less usual treatment of the active steps will be considered later.

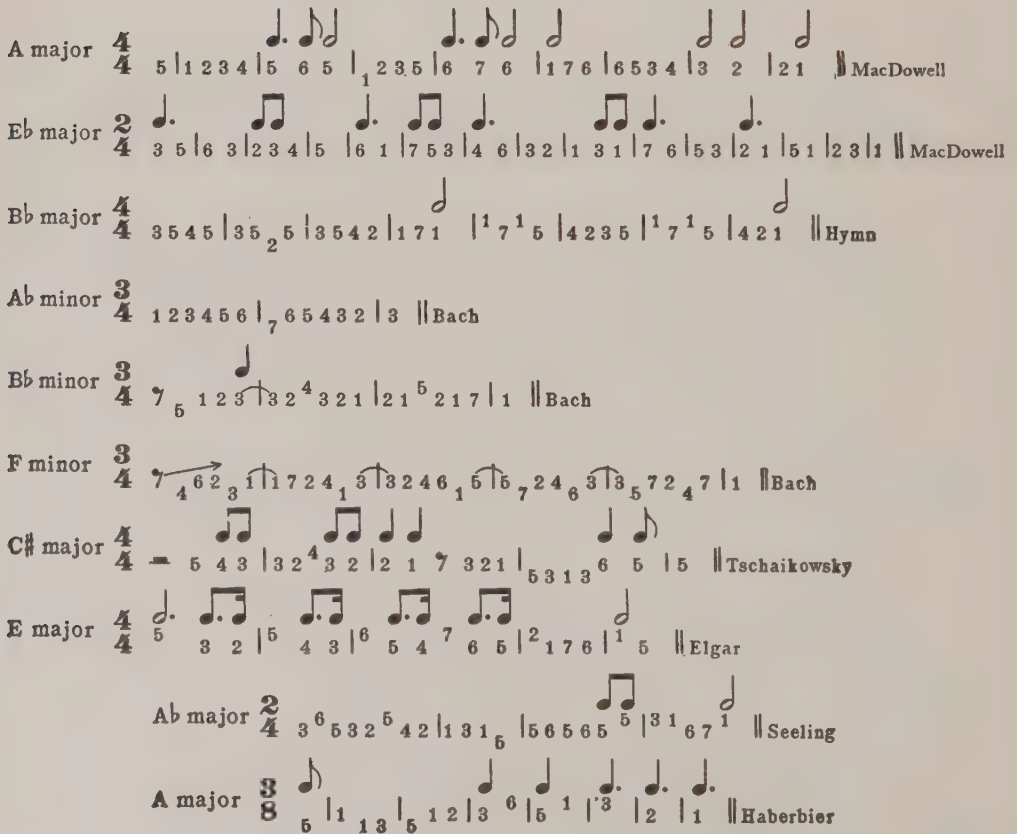
Exercise 25. Write and play the following as directed. Show which of the above rules is followed in each use of the active steps.



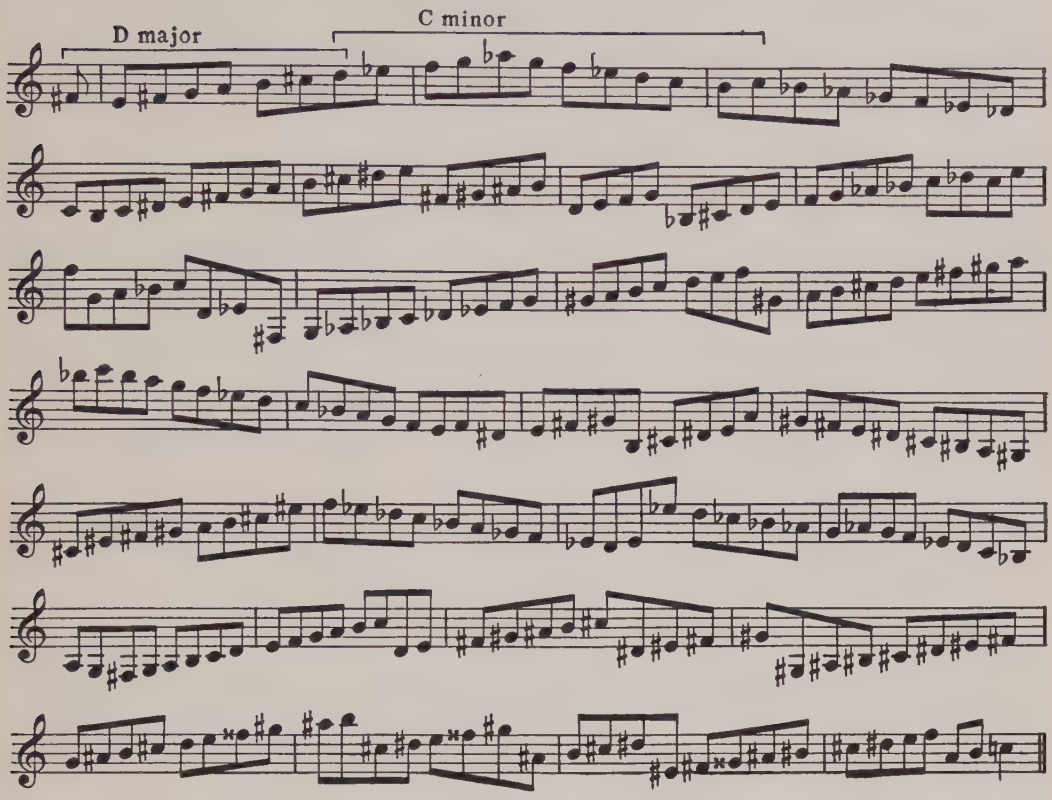
Exercise 26. Write the following in notes. Do not write a signature; supply the sharps and flats as needed before the proper notes.

Play from the numbers.

Show which rules of Lesson 22 are followed and which are broken.



Exercise 27. Bracket and name the various scales used in the following. Only major and harmonic minor are employed. Note that often the notes of one scale over-lap into the next.



LESSON 23

Summary of Intervals

55. An *Interval* is the scale relation of two notes or tones; the difference in pitch of two tones; the alphabetical or staff-space occupied by two notes.

56. Intervals are reckoned from the *lowest* to the *highest* tones, whether the tones sound together or separately, whether the skip is up or down.

57. Intervals are first reckoned alphabetically and named Primes, 4ths, etc. They are grouped:

Primes 4ths 5ths 8ves	**Perfect**	if both notes are without accidentals or have the same kind of accidentals. *Except B—F and F—B.* (See Par. 27.)
2nds 3rds 6ths 7ths	**Major**	if the 2nd occupies a whole step. if the 3rd occupies 2 whole steps. if the 6th is $1\frac{1}{2}$ steps less than an 8ve. if the 7th is $\frac{1}{2}$ step less than an 8ve.

58. If the interval does not answer to the above analysis, compare it with the major or perfect occupying the same staff degrees and reason as follows:

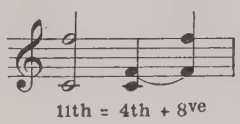
Major or *Perfect* made greater by { ½ step becomes *Aug.*; 1 step " *Doubly Aug.*

Perfect made smaller by { ½ step = *Imperfect* or *Diminished.*; 1 step = *Doubly Diminished.*

Major made smaller by { ½ step = *Minor.*; 1 step = *Diminished.*

59. Intervals not larger than an 8ve are *Simple* intervals. Those greater than an 8ve are *Compound* and are reckoned as 9ths, 10ths, etc., or as *Simple* intervals, 2nds, 3rds, etc.

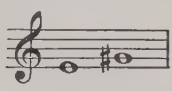
60. To calculate the actual size of a Compound interval, count it as a Simple interval and add 7 for each octave.



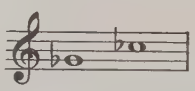
as a simple interval C to F = 4th
as a compound interval C to F = 4th + 7 = 11th

61. The following is another method of calculating intervals.

An interval is *Maj.* or *Per.* if the upper tone is in the major scale of the lower tone.

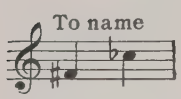


A maj. 3rd because G♯ is 3 of E maj.
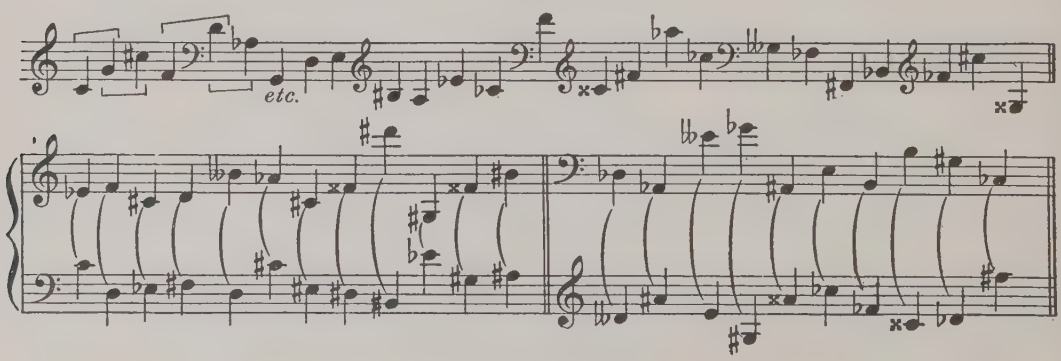


A per. 4th because C♭ is 4 of G♭ maj.
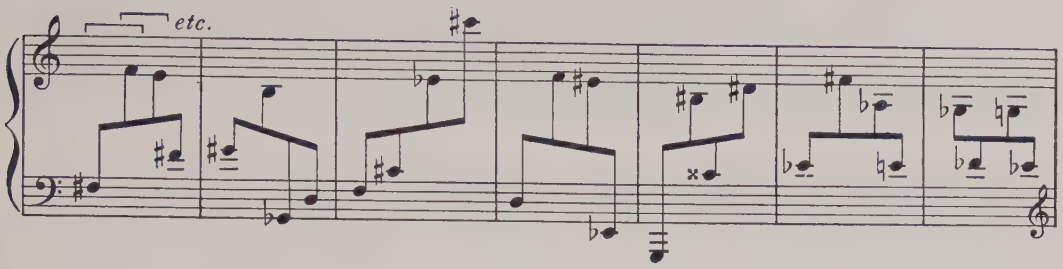
If the upper tone is *not* in the major scale of the lower tone, compare it with the tone which *is*. Then apply Par. 58.
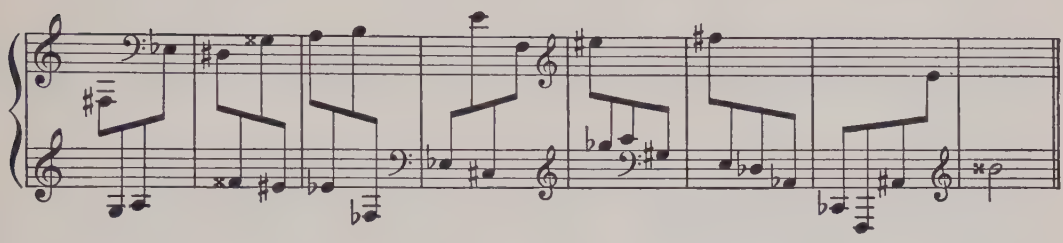


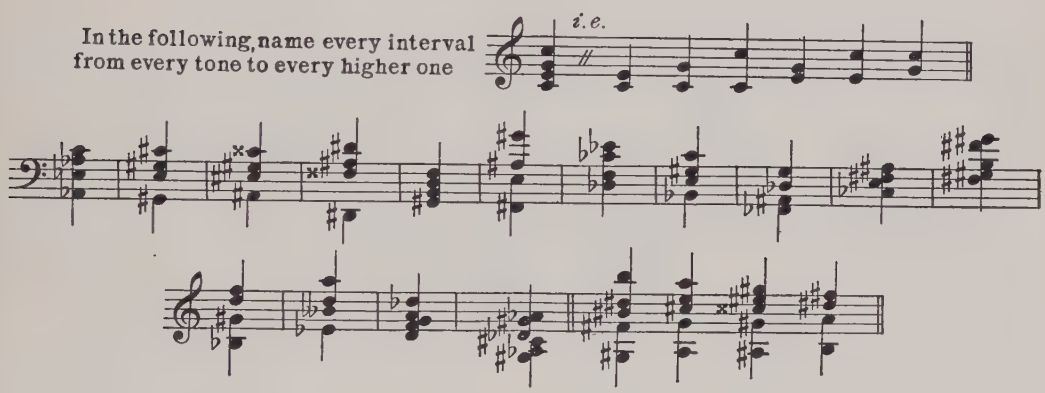
This is a 5th.
It is not Per. because C♭ is not 5 of F♯ maj.
C♯ is 5 of F♯ maj.
From F♯ to C♯ is a Per. 5th.
The given interval is a whole step smaller than the Per.
It is a Doubly Dim. 5th.

Exercise 28. Name the following intervals using the method of calculation just explained or the one detailed in earlier lessons.









LESSON 24

Consonant—Dissonant

62. Intervals are *Consonant* or *Dissonant.*

A consonant interval is relatively satisfying; it needs no ensuing interval. It is a one-syllable word, complete in itself. A dissonant interval requires another interval to follow; it is the first syllable of a two-syllable word.

All Perfect intervals are *Perfect Consonances.*

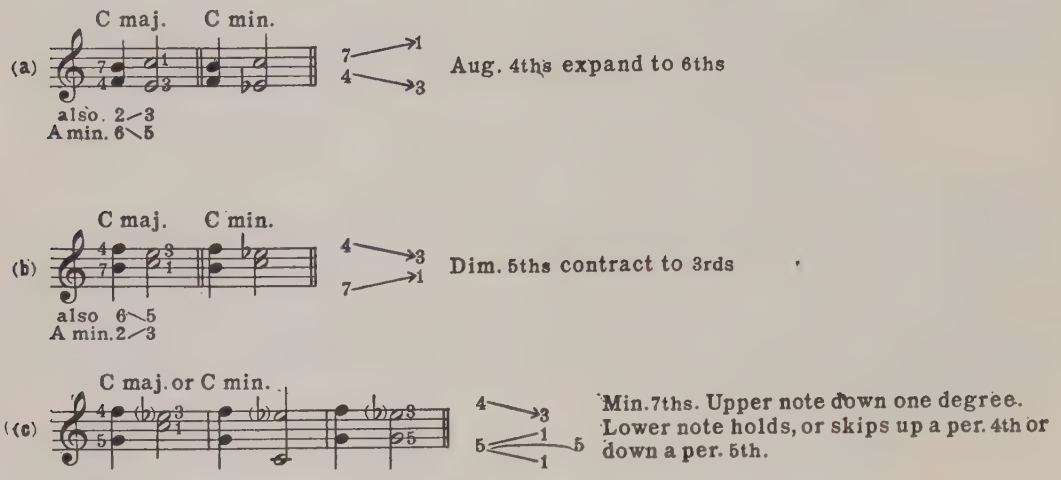
Maj. and Min. 3rds and 6ths are *Imperfect Consonances.*

All others are *Dissonances.*

63. The movement of the tones of a dissonant interval to its completion—its second syllable—is called a *Resolution.*

The resolution consists of a movement of one or both tones to the next higher or lower scale degree.

64. Most important among dissonant intervals are those formed by combining scale-tones 4 and 7 with each other or with 5. These with their resolutions are shown below. *Observe that the tendencies of the active steps are followed.*

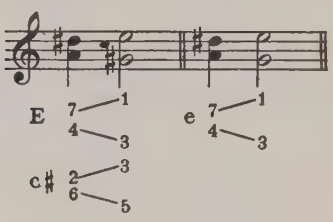


Exercise 29. Combine 4, 7 and 5 of every key and resolve.

Use Par. 64, a, b and c, as models.

Name the key; number the scale-tones; mark as being in Relative Minor when such is the case.

Write no signature. Use accidentals before the notes as needed.



LESSON 25

Melody Construction—Form

65. Music is a succession of tones or tone-clusters (chords).

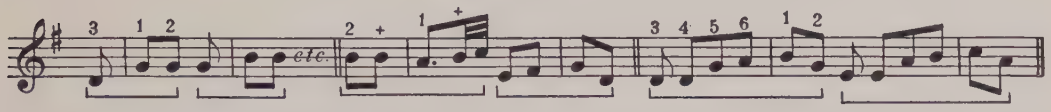
Each tone or cluster is heard for a definite length of time. The unit by which this duration is calculated is called a *Beat*, a regular pulsation which corresponds to the inch of lineal measure or the ounce of weight measure. The beat has a fixed value throughout a part or all of a composition and is indicated by the lower figure of the time-signature ($\frac{2}{4}$ $\frac{3}{4}$ $\frac{4}{4}$, etc.).

66. These beats are regularly grouped so that a strong one is followed by one or two weaker ones. This grouping results in *Measures* which, fundamentally, are of but two varieties—1 2 and 1 2 3. The so-called *Compound Measures*, $\frac{6}{8}$ $\frac{9}{8}$ $\frac{12}{8}$, etc., are simply the fundamental varieties "compounded."

$\frac{4}{4}$ = 1 2 1 2 : $\frac{6}{8}$ = 1 2 3 1 2 3

In the accepted sense of the word, a measure is the space between two barlines. Actually, it is a group of beats beginning on any division of one so-called measure and continuing until the corresponding beat of the next.

Ill. 26



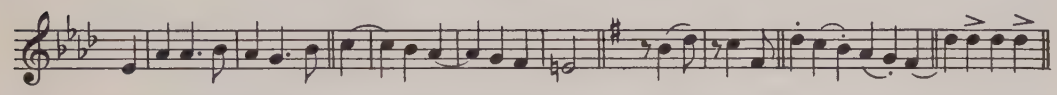
$\frac{4}{4}$ measure, for instance, may be 1 2 3 4 or 2 3 4|1 or 3 4|1 2 or 4|1 2 3
$\frac{3}{4}$ measure may be 1 2 3 or 2 3|1 or 3|1 2.

67. The result of distributing tones of equal or varied durations among the beats is *Rhythm.* Rhythm is regular when beat 1 is the strong or accented one. (Melodies 1, 3, 7 and 8 of Ex. 30.)

68. Otherwise it is irregular (but not less good).

Irregularity is artificially caused by special accent marks, by longer tones appearing on weak beats, by the use of rests on strong beats, by sustaining or repeating tones from the weak to strong measure divisions.

Ill. 27



Irregularity is justified at any time by deliberate intention which is proven when the irregularity occurs more than once.

69. Musical material moving through eight measures and reaching a point of rhythmic and melodic rest is called a *Period.*

Eight measures is fundamental. A period may be four or sixteen measures and, by certain devices of development, may aggregate any irregular number—7, 9, 11, etc.
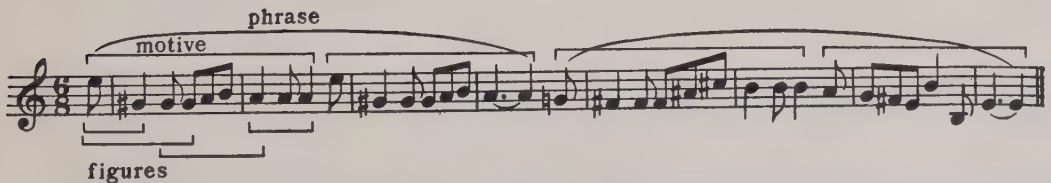
A Period corresponds to the spoken sentence. It must express a complete idea and reach a logical conclusion.

It usually is divided into two equal parts of four measures each called *Phrases.* The first Phrase is the *Antecedent,* the second the *Consequent.*

While the end of the Period is conclusive, that of the first phrase is less definite. It is a pause for breath before completing the sentence. Its punctuation corresponds to a comma. All endings are called *Cadences.*

70. The phrase is divisible into rhythmic fragments called *Motives* and sometimes into very brief *Figures.* A Motive is usually half the length of the phrase—seldom over two measures. A Figure consists of just a few tones.

Ill. 28

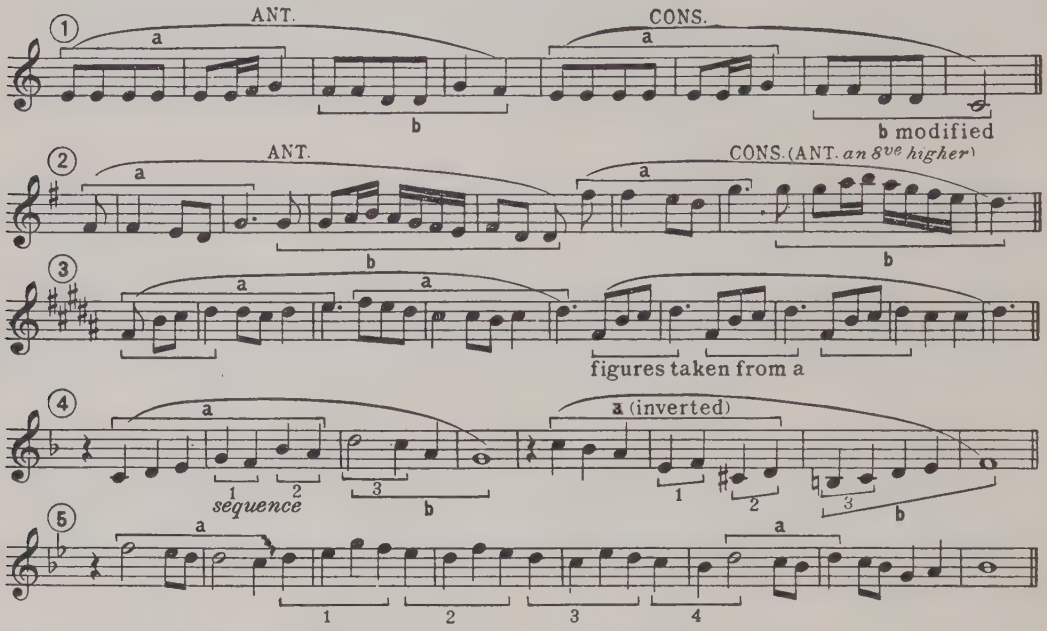


A few periods are appended. The slurs extend over Phrases; the lettered brackets indicate Motives.

Listen to the Cadences at the end of both Phrase and Period. A *Complete Cadence* ends each Period (scale-step 1 preceded by 7, 2 or 5.) *Half Cadences* end each first Phrase. More will be said of these later.

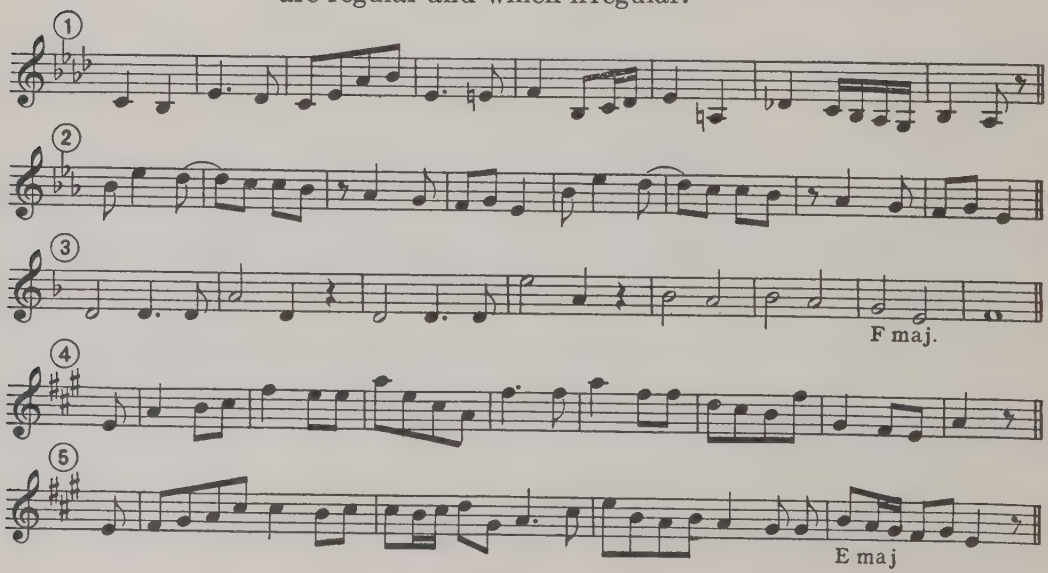
Also note how each Period is "held together" by repetition of figures, motives or the phrase.

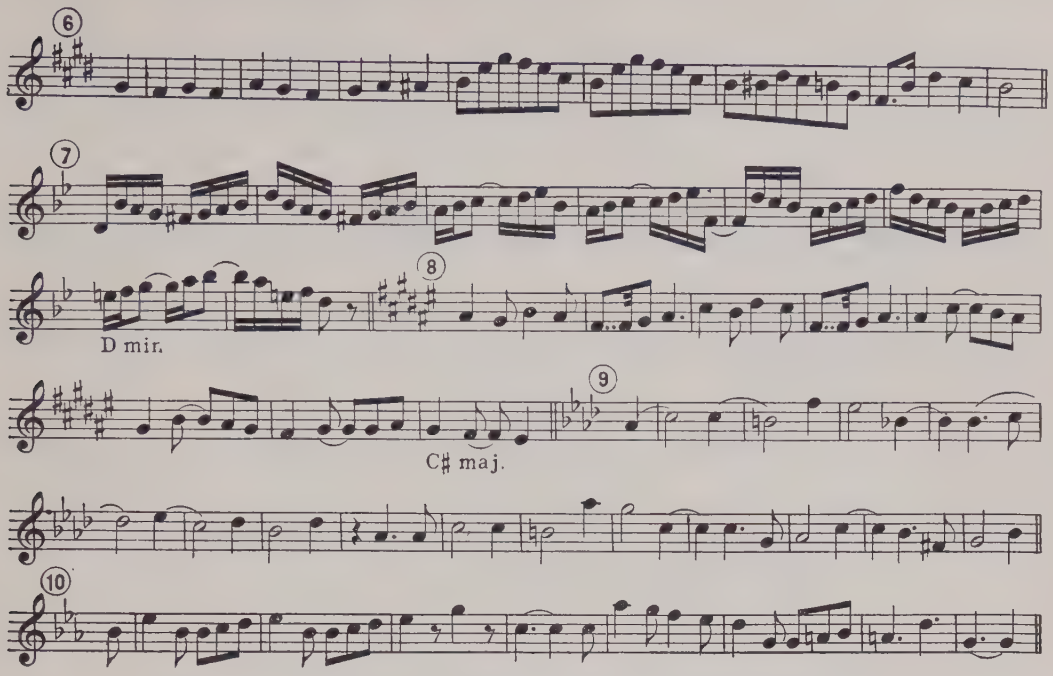
Ill. 29



The study of Musical Form is an essential feature of musical education. Standard texts are available and should be used in connection with the study of harmony.

Exercise 30. Analyse the following for Figures, Phrases, Cadences, Sequences. Identify all recurrences of material. Use the plan of diagraming shown in Ill. 29. State which rhythms are regular and which irregular.



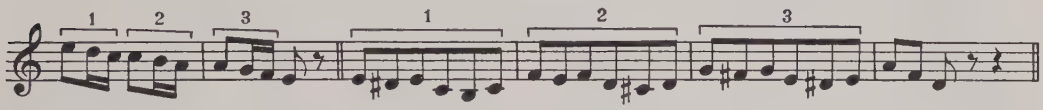


LESSON 26

Melody Construction—Sequences

71. A Sequence consists of a musical pattern and one or more recurrences of that pattern on higher or lower degrees.

Ill. 30
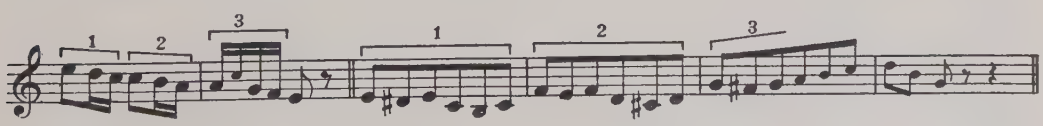


The pattern is bodily transferred up or down, each recurrence being usually the same space away from the preceding as the latter is from the one that preceded it.

72. The intervals taken by the tones of the pattern need not be reproduced literally except as to their numerical quality. For instance, a skip of a 3rd is reproduced as a 3rd but may be modified from maj. to min., min. to maj., etc. Whether exact or modified depends upon the scale degrees involved in each recurrence.

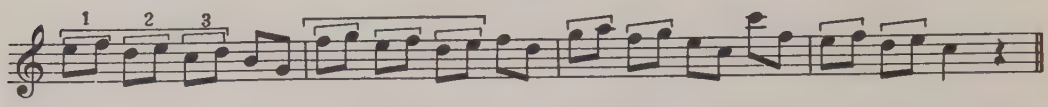
73. A sequence seldom retains musical interest after the third use of the pattern. More often the third appearance is a shortened version or one altered tonally or rhythmically.

Ill. 31



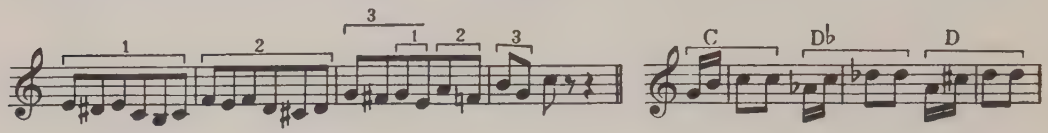
74. One sequence pattern may be made up of a sequence of a smaller pattern. Several sequences of the same pattern may occur in the same melody provided a "break," even of a few tones, is supplied between them.

Ill. 32



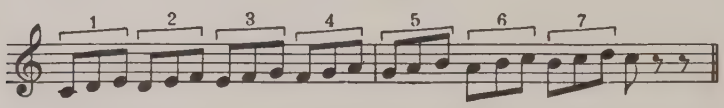
75. A favorite device is to let the last recurrence of a pattern "taper off" into a sequence of the last used part of the pattern. The recurrences may stay in one key or be transposed into other keys.

Ill. 33

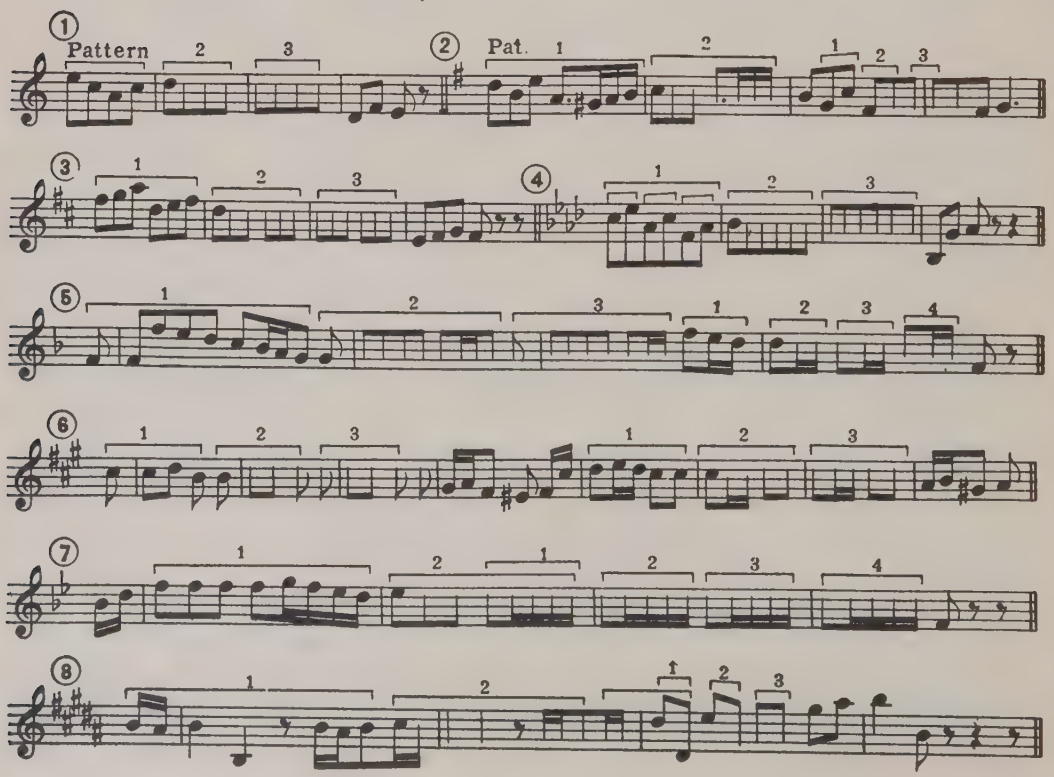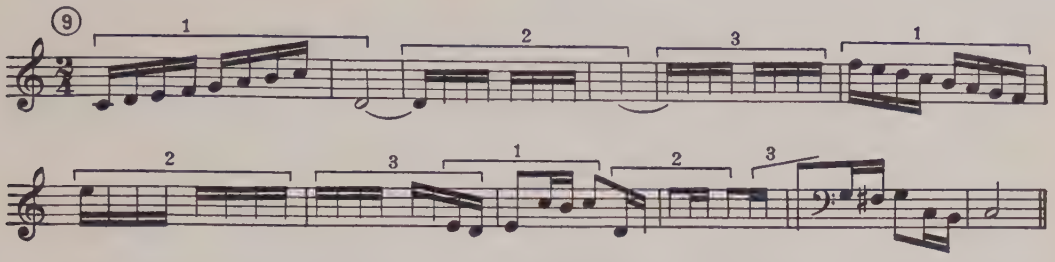


76. A short pattern permits a greater number of recurrences than a long one.

Ill. 34

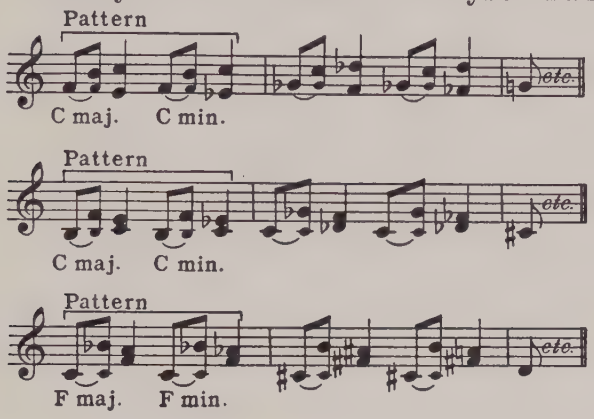


Exercise 31. Complete the following melodies, carrying out each sequence. The pattern is indicated by ⌐1¬ and the recurrences by ⌐2¬ ⌐3¬, etc.





Exercise 32. Transpose each of the following patterns in sequence through all keys. Do this first at the keyboard and then in writing.



LESSON 27

Melody Construction—Tone-Leading

A simple melody, besides complying with the demands of Form, must adhere to certain limitations having to do with tone-leading. Some of these have been detailed and will be included in the following summary of melodic rules:

77. The first tone is usually 1 or 3. If the first beat is a weak one, 5 or any active step may be used.

The last tones are 1 preceded by 2, 7 or 5—sometimes 3 preceded by 4 or 2.

78. The melody should proceed smoothly and naturally with due concern for musical interest and climax.

(*a*) Avoid monotony as well as abrupt changes in rhythm or register.

(*b*) The space between the highest and lowest tones should not exceed a 12th—the normal range of a human voice.

(*c*) There is usually but one highest and one lowest tone in a short melody.

(*d*) Do not repeat a tone from a weak beat to a strong one or from a short value to a long one unless the irregularity is featured —that is, unless it recurs (Par. 68).

79. A tone may skip any well-sounding interval.

(*a*) Skips of maj. 7ths and of aug. intervals are forbidden. Min. 7ths and dim. intervals should be used sparingly and then under the restrictions of Par. 54.

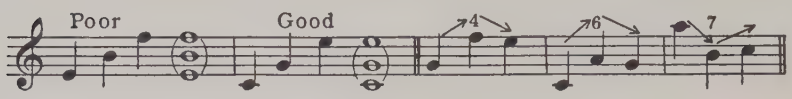
(*b*) After a large skip in one direction it is usual to return to some tone within the interval.

(*c*) A series of skips in the same direction is acceptable only if all tones involved would sound well heard simultaneously.

(*d*) If a skip is made to an active tone, follow the injunction—skip *down* to a tone that ascends: *Up* to a tone that descends.

(*e*) A skip of a 3rd is subject to no particular restriction.

Ill. 35



80. Active steps normally move according to tendency.

(*a*) The exceptional patterns 1 7 6, 3 4 5, 5 6 7 8 are available.

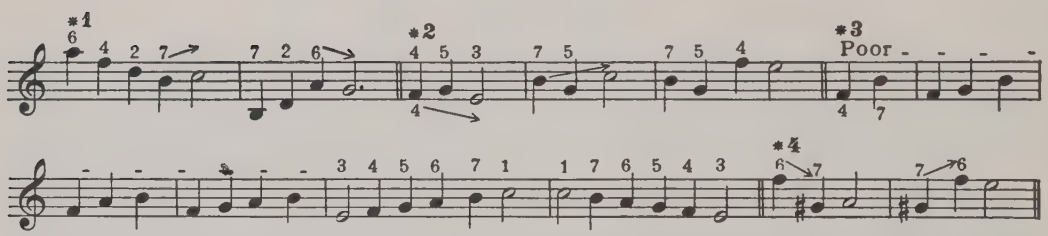
(*b*) After a succession of active steps concede to the tendency of the last one heard. (*1.)

(*c*) If steps 4 or 7 move to 5, it is usually necessary to proceed either to the tone required by the tendency of the active step or into another active step. (*2.)

(*d*) If 4 and 7 are both in the same melodic line, 4 may not be the lowest or 7 the highest point in that line. In other words, a series of tones moving in one direction may contain 4 below 7 only in the patterns 3 4 5 6 7 1 or 1 7 6 5 4 3. (*3.)

(*e*) If 6 and 7 of the minor are used successively, the melodic-form must be complied with, except as at *4 below.

Ill. 36



81. *A sequence justifies many exceptions such as irregular intervals, unusual leadings of active steps, tone repetition, etc. If the original pattern is faultless, the repetitions in sequence may be irregular.*

Exercise 33. Write a number of original melodies, some four and some eight measures long. Use different keys and different rhythms. Illustrate the idea of motive development shown in Lesson 25, and that of Sequence in Lesson 26. Test every tone succession at the piano. Do not write anything that has not been listened to with concentration.

LESSON 28

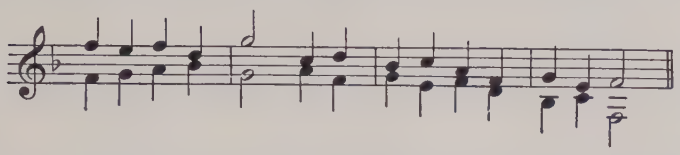
Combination of Two Melodies

To emphasize melodic requirements and as a first step in part-writing, the problem of adding an original melody to a given melody will be considered.

This subject is commonly known as *Counterpoint*, 1st Species, Note-against-Note. It cannot be thought less than reasonable to suggest that four-part harmony offers much of its complexity because of the usual lack of preparation in dealing with fewer than four-parts.

The added melody moves in tones of equal value with the given melody:
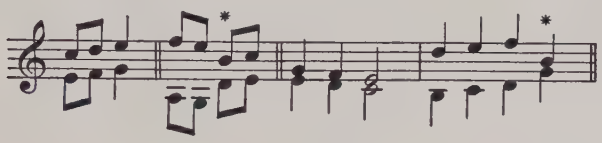
Ill. 37
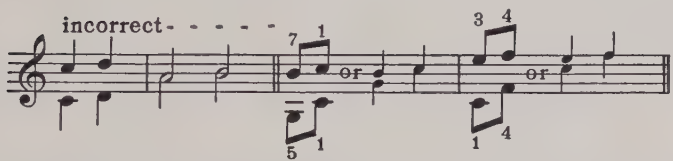


82. The two melodies have the choice of moving in *Parallel, Contrary* or *Oblique* motion. The latter results when one part is stationary while the other ascends or descends. Contrast is best effected by contrary or oblique motion. Parallel motion is not forbidden or even advised against except as specifically noted in Par. 83. A judicious mixture of all three obtains the most satisfactory results.

83. The interval occupied by each pair of tones sounding together must be carefully reckoned. Those permitted are:

(*a*) 3rd and 6th: Seldom over three in direct succession. More are inclined to cause monotony unless the succession is broken by contrary motion (as at *).

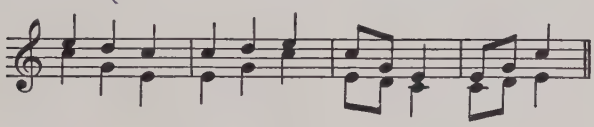


(*b*) 8ve and unison: Never two in succession except that the same one may be repeated. An 8ve or unison is rarely preceded by a 5th (or vice versa). *Parallel motion to an 8ve or unison is best avoided unless one part moves a half-step.*
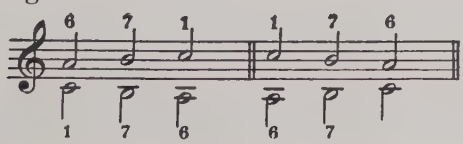


(*c*) Aug. 4th: Dim. 5th: Min. 7th (steps 5 and 4) only if as shown in Lesson 24.

(*d*) Per. 5th } Combining step 5 with 1 or 2 in interval groups simi-
Per. 4th } lar to those shown here.

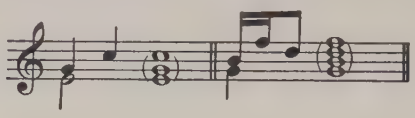


(*e*) The first and last intervals should consist of step 1 in both melodies or 1 and 3 combined.

(*f*) Step 7 may occur simultaneously in both parts only in the following successions.

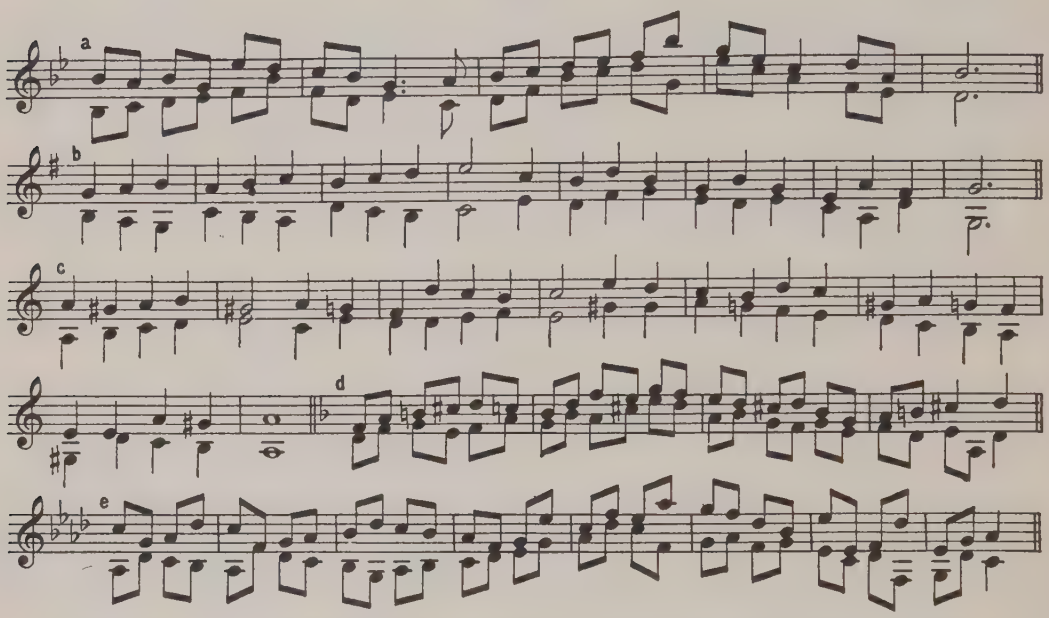


(*g*) If one melody-tone is stationary while that in the other melody skips, all tones involved—the stationary one and those in the skips—should sound well if heard simultaneously.



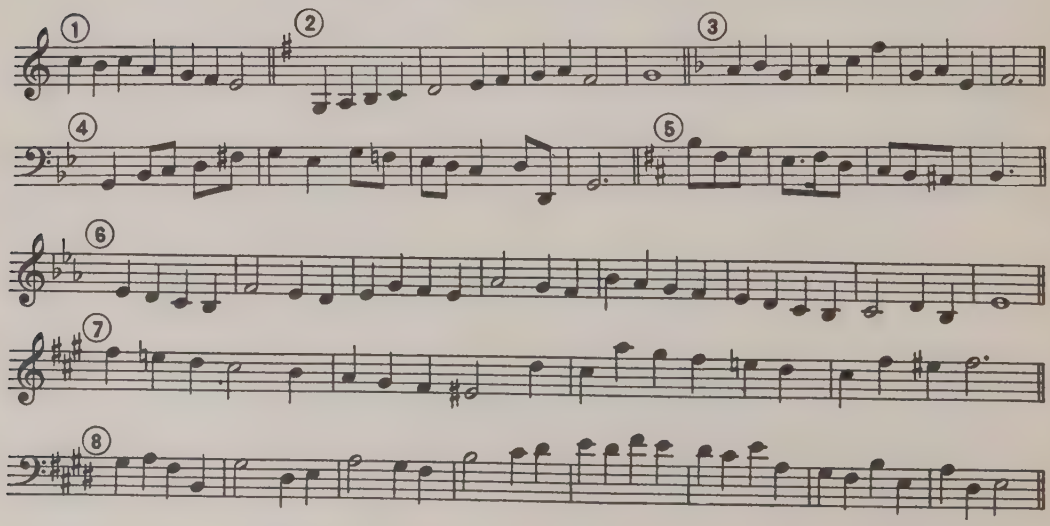
Study the following illustrations. The test of any such combinations is: *Is each melody acceptable in itself and do the two sound well together?*

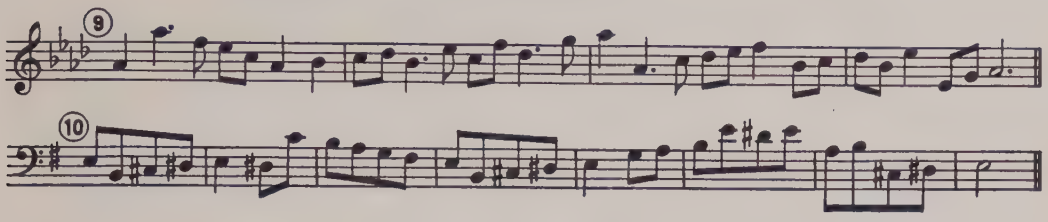
Ill. 38



Exercise 34. To each of the following add another melody. If the given one is on the treble staff, the added one should be on the bass staff, and vice versa.

As a second assignment, transpose the given melody to the other staff and add a new counter melody.



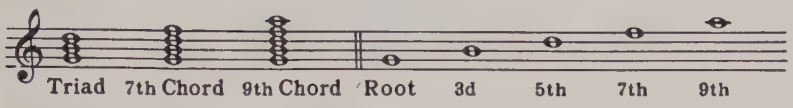


LESSON 29

Chords—Elementary Shape

84. A *Chord* is a structure of tones consisting of a fundamental or *Root* and several other tones derived as a 3rd and 5th, a 3rd, 5th and 7th, a 3rd, 5th, 7th and 9th above it.

Ill. 39
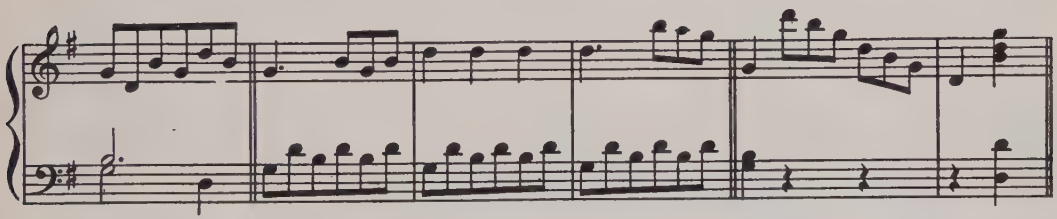


A chord of three tones is a *Triad;* of four tones is a *Seventh Chord;* of five tones, a *Ninth Chord.*

85. A chord has various positions or *Shapes;* the tones may be sounded together or separately, but it is always named in the letter-order of "*Root*—3rd, 5th, etc."

The following are different shapes of G-B-D:

Ill. 40

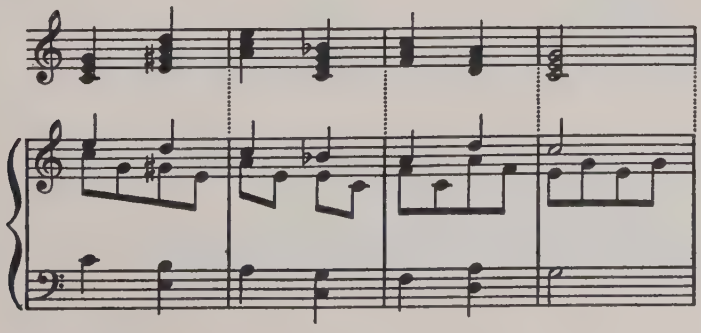


86. The first step in chord analysis is the naming of each in its *Elementary Shape:* "Root—3rd, 5th, etc."

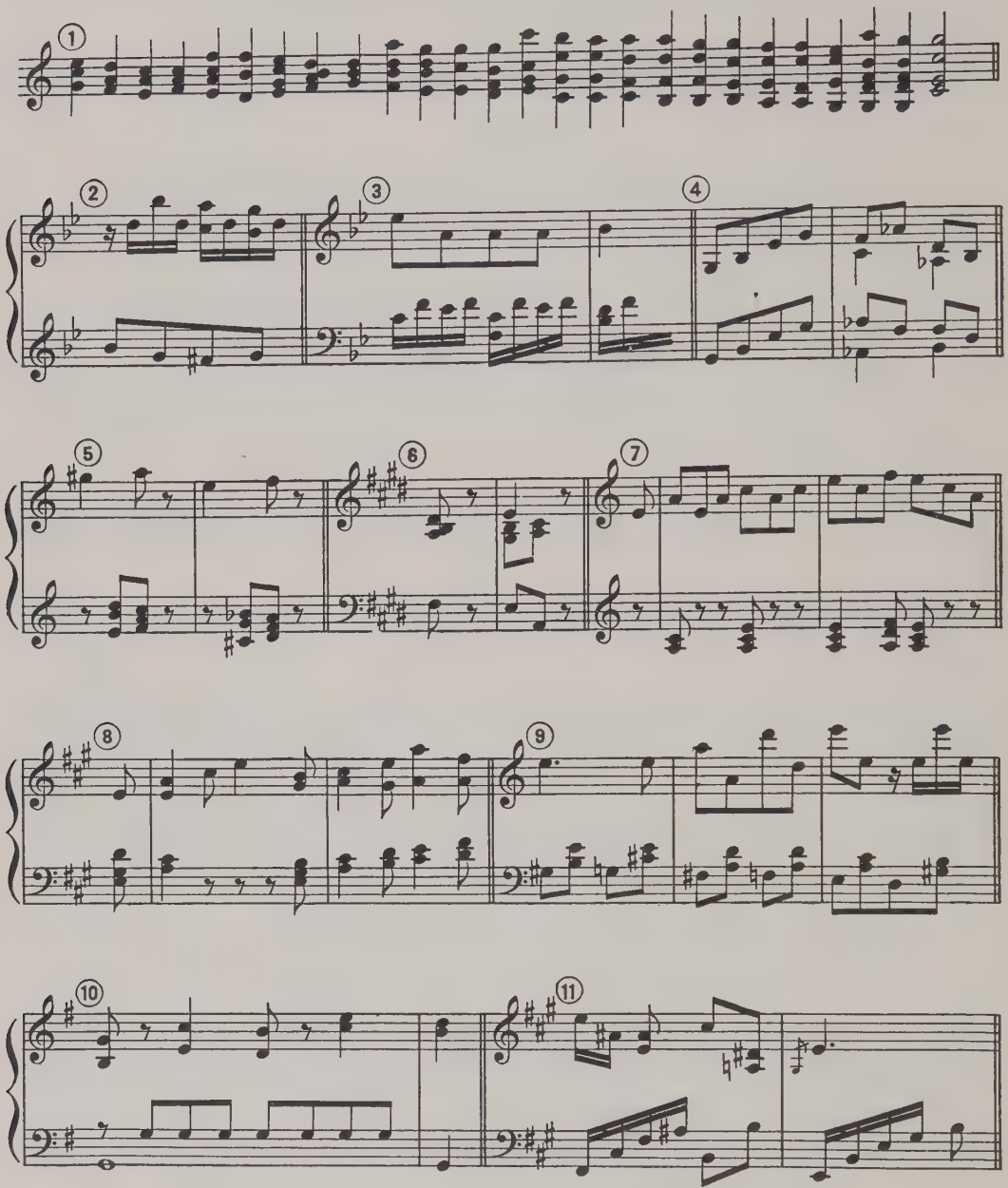
In case all notes of a chord appear simultaneously the analysis consists merely of eliminating duplicate letters and reciting or writing the notes in proper order.

If the notes are stretched out over an extended staff space, spell them as they appear until sufficient have been observed to make a triad, or 7th chord (occasionally a 9th chord). This chord prevails until notes foreign to it appear and a new analysis is necessary.

Ill. 41



Exercise 35. Rewrite the following chords in their elementary shapes, using the plan shown in Ill. 41.



LESSON 30

Classification of Triads

87. *Triads* are classified as *Major, Minor, Diminished and Augmented,* taking the name of a characteristic interval in the chord.

Maj. and Min. triads take the name of their 3rd.

Dim. and Aug. triads take the name of their 5th.

88. Each is analysed in two ways:

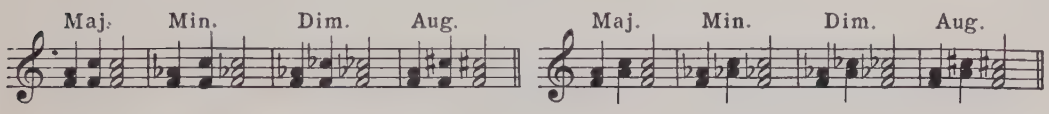
A *Major Triad* has a
Major 3rd—Per. 5th.....or.....*Maj. 3rd* plus a *Min. 3rd.*

A *Minor Triad* has a
Min. 3rd—Per. 5th.....or.....*Min. 3rd* plus a *Maj. 3rd.*

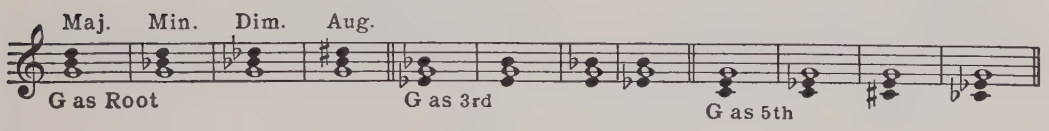
A *Diminished Triad* has a
Min. 3rd—Dim. 5th.....or.....*Min. 3rd* plus a *Min. 3rd.*

An *Augmented Triad* has a
Maj. 3rd—Aug. 5th.....or.....*Maj. 3rd* plus a *Maj. 3rd.*

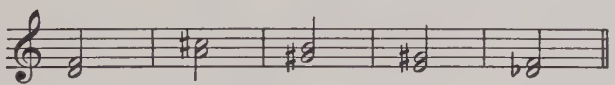
Ill. 42

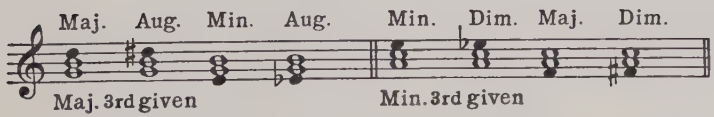


Exercise 36. Every note is the root of four triads, the 3rd of four triads and the 5th of four triads. Write the twelve triads containing each of the following notes: B, E, A♭, D♭ F♯. Pattern after the following:

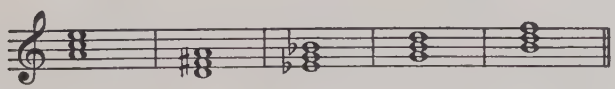


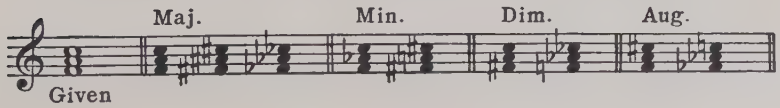
Exercise 37. A maj. 3rd belongs to one Maj. triad, one Min. and two Aug. A min. 3rd belongs to one Min., one Maj. and two Dim. triads. Write the triads containing the following 3rds:





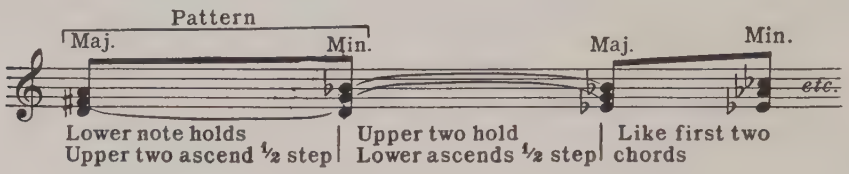
Exercise 38. By the use of accidentals, raising or lowering the notes a *half-step*, make as many Maj., Min., Dim., and Aug. triads out of the given ones as are possible. Analyse the example:



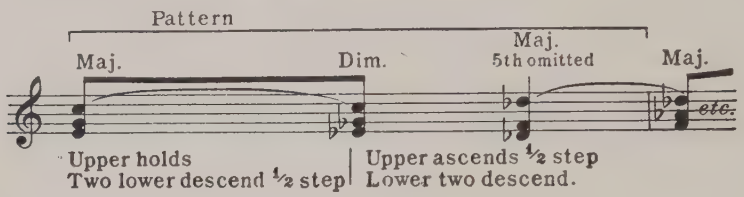


Exercise 39. *Play* and *write* the following patterns in transposing sequence, first analysing the patterns for the movement of the fingers and the character of the chords—major, minor, etc.

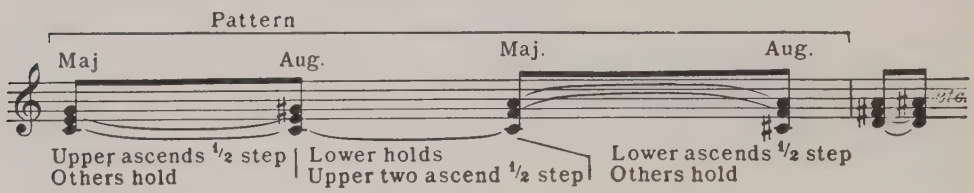
Alternating Major and Minor:



Alternating Major and Diminished:



Alternating Major and Augmented:



Analysis of Triads

89. Roman numerals are used to designate the scale degree upon which a chord is built and, by their size and additional symbols, to show the character of the chord.

In a major key	I	IV	V	are *Major* triads.
	II	III	VI	are *Minor* triads.
		VII°		is a *Diminished* triad.
In a minor key	V	VI		are *Major* triads.
	I	IV		are *Minor* triads.
	II°	VII°		are *Diminished* triads.
		III+		is an *Augmented* triad.

That the numeral is large means the chord has a maj. third; that it is small means the chord has a min. third.

The small circle ° signifies a dim. fifth; the sign + means an aug. fifth; no symbol after the Roman numeral signifies a perfect fifth.

i.e., VII° implies a triad on the leading-tone and that it contains a min. third (small numeral) and a dim. fifth (the circle °).

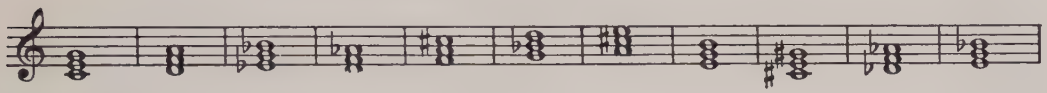
The difference in size of the numerals will not appear in the printed text after this lesson. The pupil, however, will be required to make the distinction in all analysis as a matter of brevity in designating the character of the chords.

90. The classification in Par. 89 is more practicably assembled as follows:

	Major Key			Minor Key	
Major triads	I	IV	V	V	VI
Minor triads	II	III	VI	I	IV
Dim. triads	VII°			II°	VII°
Aug. triads				III+	

Obviously, every maj. triad belongs to five keys; every min. triad to five keys; dim. triads to three and an aug. to one.

Exercise 40. Complete the following analysis. Additional drill may be obtained by analysing in like manner the triads obtained in Ex. 36, 37 and 38.



I of C maj.	II of
IV „ G „	III
V „ F „	VI
V of f min.	I
VI „ e „	IV

LESSON 31

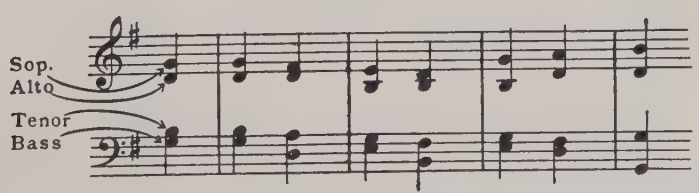
Part-Writing

91. Ill. 43 is a familiar example of what is known as *Four-Part Harmony.* It is written for the four voices of a vocal quartet, soprano, alto, tenor and bass.

Each voice sings its particular melody, moving from a tone of one chord to one of the next. The result is a series of chord formations and an outstanding principal melody sung by the soprano.

The excerpt could be played by four stringed or four wind-instruments, or by one performer on the piano or organ. In any case it is four-part harmony and the parts, whether played, sung or printed, are called *Soprano, Alto, Tenor* and *Bass.*

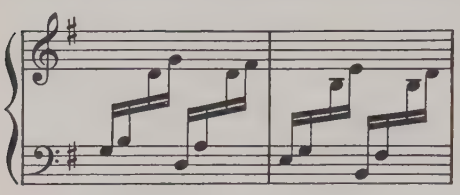
Ill. 43



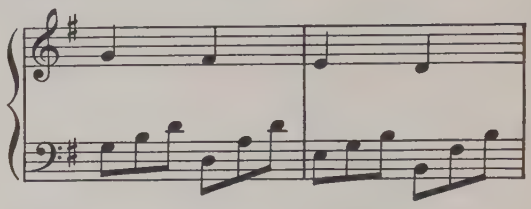
92. The movement in each part is called *Part Leading* or *Voice Leading.* The simultaneous movement of all parts is *Harmonic* or *Chord Progression.*

Harmony and Analysis are taught through the medium of such quartet-writing because of its simplicity and clarity and because most music is reducible, in analysis, to a similar form.

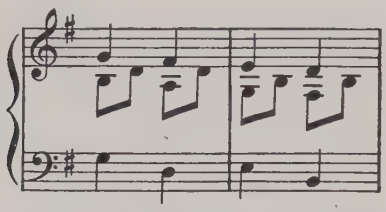
93. The following illustrations are variations of Ill. 43, using exactly the same notes but reducing or amplifying the number of parts.



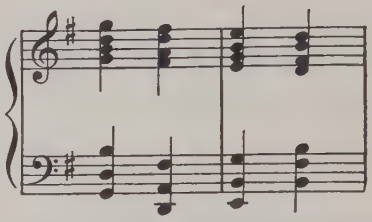
This is in *one part.* Only one tone is heard at a time; one solo instrument could perform it; one finger could play it on the piano.



This is in *two parts.* The upper line could be called a *soprano,* the lower a *bass.*



Three tones are heard simultaneously; this is in *three parts*—a bass, alto and sop.



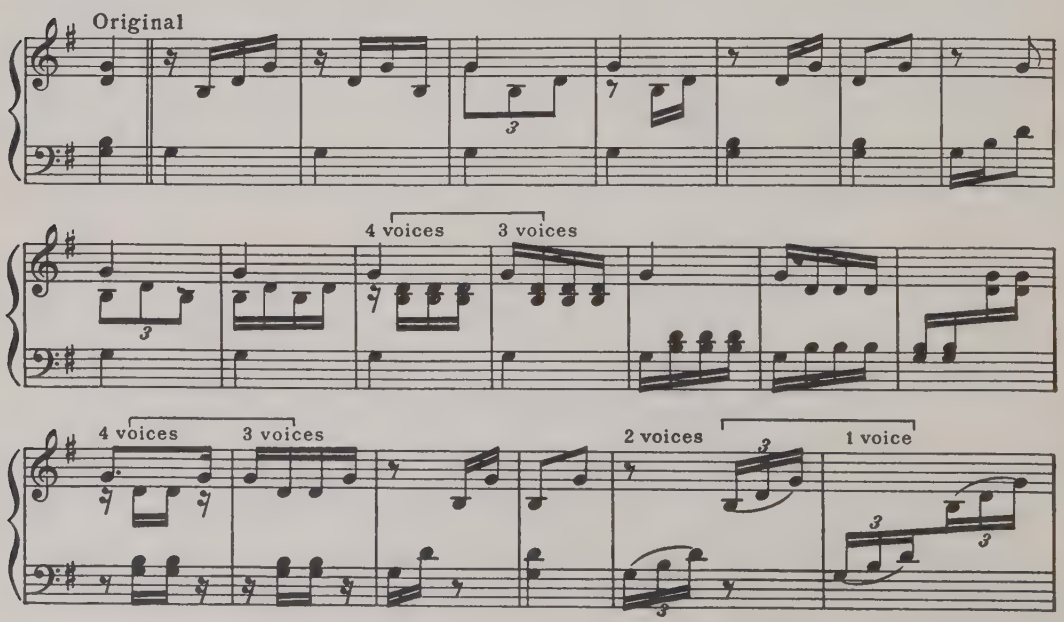
These are massed chords with no definite number of parts. The original part-writing shows in the lowest or bass part and the *highest three notes of each chord.*

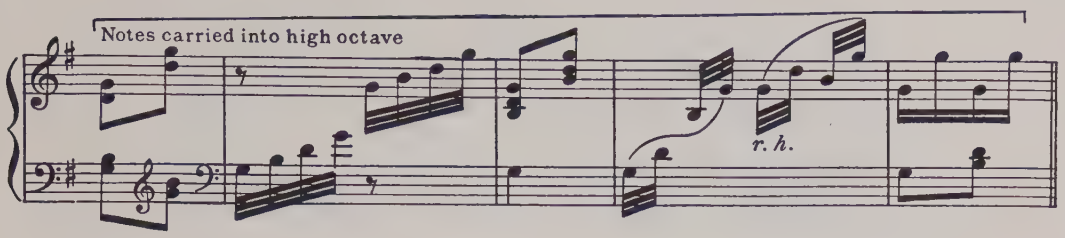
94. The first chord of Ill. 43 is shown below in a number of variated forms:

Observe: Though the rhythmic patterns and the order of note succession are varied and in a few instances the notes are carried into higher octaves, still the highest and lowest notes are the same as in the original (in letter-name at least) and *all* the notes appear somewhere in the group. The value of a quarter-note remains.

The stemming and rests should be considered as they often indicate the number of voices involved.

Ill. 44





Exercise 41. Write *six* variations of Ill. 43. Use patterns selected from Ill. 44 or original ones. Use *one pattern throughout* each variation.

The entire Hymn (Old Hundredth) may be similarly treated if desired.

LESSON 32

Four-Part Harmony

95. The first concern in arranging a chord in four-part harmony is the tone to be sung by the bass: the second concern is the tone given to the soprano.

A three-tone chord is called a *Triad* only when its root is in the bass. It is then in the *Root* or *Fundamental Position.*

As for the soprano, the chord is described "root in sop.," "3rd in sop.," "5th in sop."

96. As a triad has but three tones, one will have to be used twice. This is called *Doubling* or *Duplication.*

With triads I, IV and V (root in bass):

The root is usually doubled.
The root may be tripled and fifth omitted.
The third may not be doubled (for the present) *or omitted.*
The fifth may not be doubled.

With triads II, III, VI (root in bass):

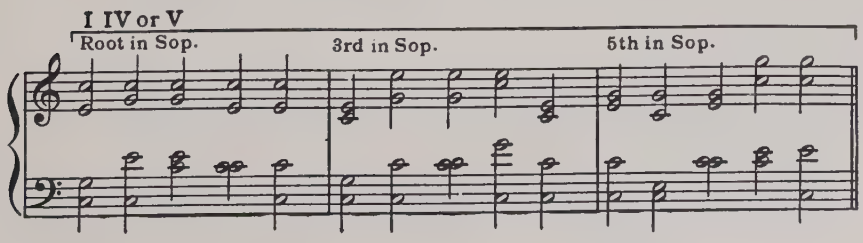
The root may be doubled.
The third may be doubled.
The fifth may not be doubled or omitted.

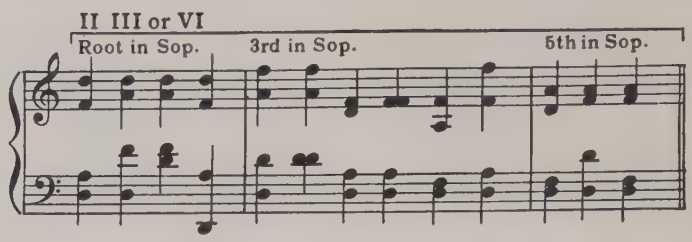
Abbreviated

I, IV and V may have:
Two roots, 3rd and 5th or
Three roots and a 3rd.

II, III and VI may have:
Two roots, 3rd and 5th or
Root, two 3rds and 5th.

Ill. 45



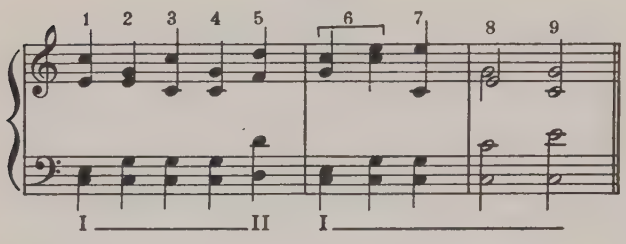


97. In any arrangement of the tones *there may not be over an octave between the alto and soprano or the alto and tenor.* (Later exceptions will occur.)

The parts may not cross. The alto may not sing higher than the soprano, the tenor lower than the bass, etc. (Exceptions later.)

The following are incorrect for reasons given:

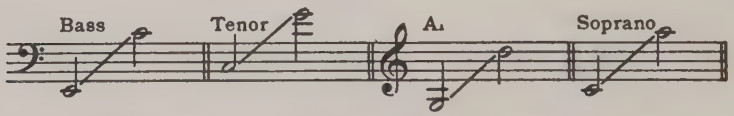
Ill. 46



1. 3rd doubled in I.
2. 5th doubled.
3. 3rd omitted.
4. 3rd omitted and 5th doubled.
5. Root tripled in II.
6. Space between Alto and Tenor too great.
7. Space between Alto and Sop. too great.
8. Sop. lower than Alto.
9. Tenor higher than Alto.

98. The parts should rarely exceed the following vocal range:

Ill. 47



Exercise 42. Write the I of G, B♭ and E in all possible correct arrangements.
Write II of F, III of A, VI of B.
Follow the plan of Ill. 45.

LESSON 33

Given Melody and Bass

99. Conventional harmony exercises consist of a given melody or given bass.

The given melody requires the proper selection of chords.

The given bass dictates the chords and involves the formation of good melody.

Both demand satisfactory voice-leading in every part.

The rules and method of working will be developed gradually.

Given Melody—

100. *Rule: If a melody contains successive notes of the same good chord, harmonize with that chord.*

In the following assume that the Soprano has been given:

Determine the chord involved.

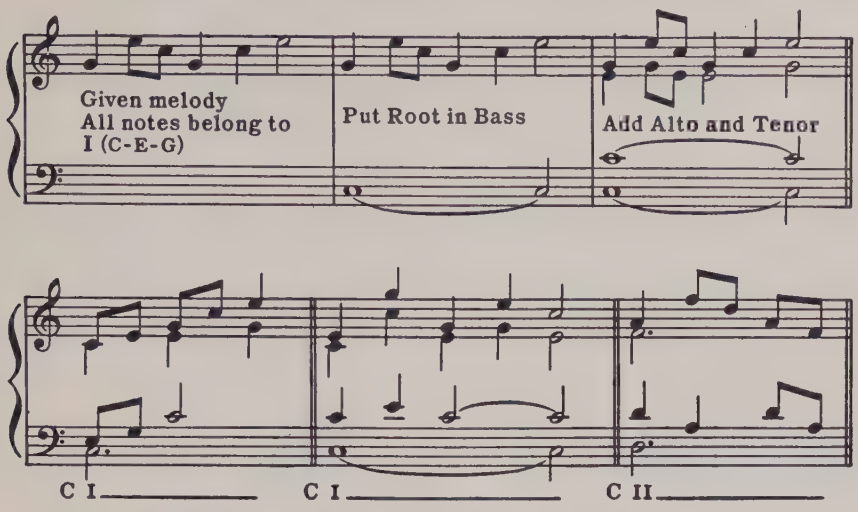
Place root in bass.

Supply alto and tenor notes with due regard for Par. 96 and 97.

The inner parts (alto and tenor) should move as little as possible.

Analyse carefully, noting especially the doubling of chord intervals.

Ill. 48



Given Bass—

101. The given note is the root of the chord.

The figures *above* the bass indicate the Sop. melody.

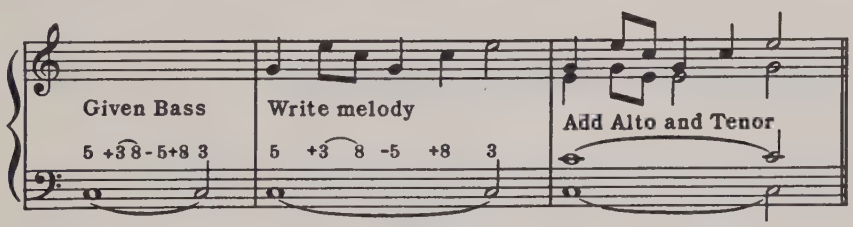
8 = Root of chord in melody.
5 = 5th of chord in melody.
3 = 3rd of chord in melody.

102. The + and − indicate that the required chord interval shall be the highest (+) or lowest (−) one in the Sop. range. (See Par. 98.)

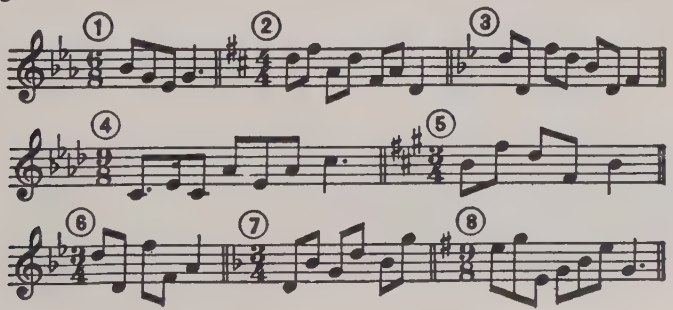
When the numeral is not preceded by these symbols take the nearest required note.

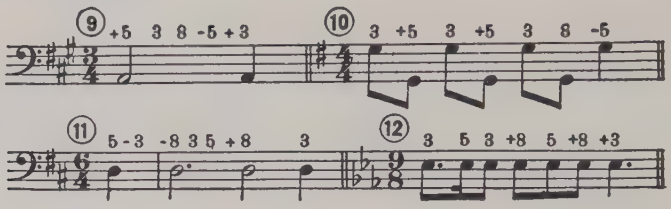
To produce the melody and chord arrangements of Ill. 48 the bass exercise would appear thus:

Ill. 49



Exercise 43. Harmonize the following melodies and basses:



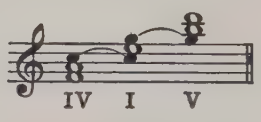


LESSON 34

Principal Triads

103. I, IV and V are the *Principal Triads* of a key. They are built on the principal scale degrees, contain every tone of the scale between them and move to and from each other smoothly and naturally. (The exception V to IV will be noted later.)

104. I and V have a common tone.
I and IV have a common tone.
IV and V have *no* common tone.



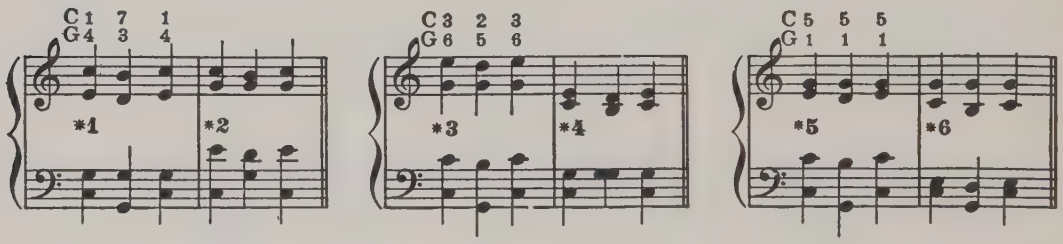
105. The progression I–V of one key is IV–I of the dom. key.
The progression I–IV of one key is V–I of the sub-dom. key.

Ill. 50



It follows then that the problems of I–V are the same as IV–I and those of I–IV the same as V–I.

Ill. 51
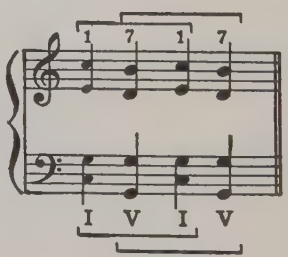


Observe: In each illustration one voice sings C B C; another sings E D E; another G G G; the bass sings C G C.

In *1, *2, *6, two voices move in parallel 6ths.
In *3, *4, *5, two voices move in parallel 3rds.
One voice repeats its note in each.
The bass takes the root of each chord.

106. In each group the second chord could be the first of a new pattern.
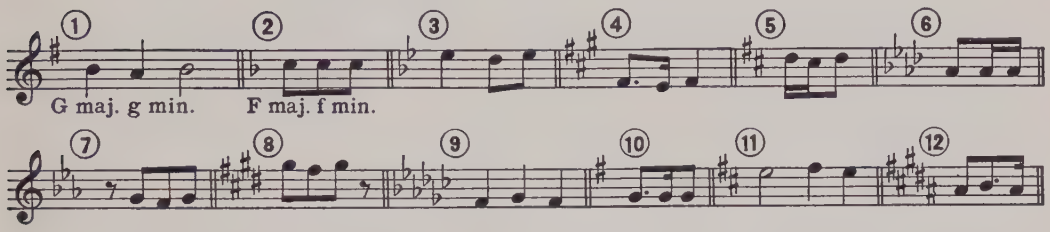
Each group is equally acceptable in the tonic minor. Prove this by playing Ill. 51, in C minor and G minor.
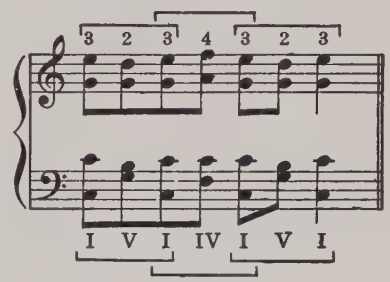


107. Melody patterns resulting from these chords are:

1 . 7 . 1 : 4 . 3 . 4 : 3 . 2 . 3 : 6 . 5 . 6 : 5 . 5 . 5 :
7 . 1 . 7 : 3 . 4 . 3 : 2 . 3 . 2 : 5 . 6 . 5 : 1 . 1 . 1 :
} Maj. or Min. Key.

Exercise 44. Harmonize the following three-tone melodies, first determining the scale-number of each given tone and applying the proper chord-group:



Exercise 45. Certain of the groups of Ill. 51 can be combined.
Write the following melodies in the specified keys and harmonize. Use interesting rhythmic designs (see Par. 122).
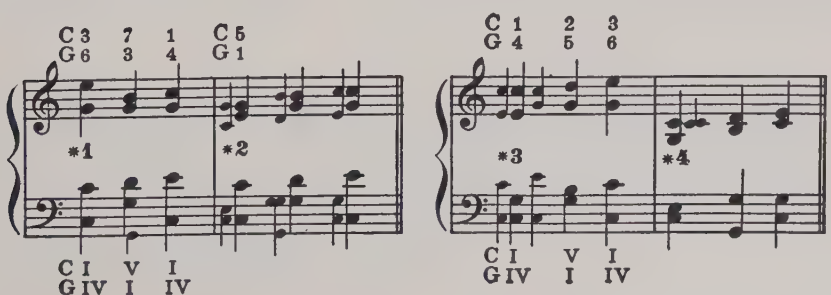


① A min. 1 7 1 1 1:
② C♯ min. 3 2 3 4 3:
③ F♯ min. 5 5 5 6 5:
④ B min. 3 4 3 2 3:
⑤ B♭ 7 1 7 1 1 1
⑥ A♭ 2 3 2 3 4 3
⑦ E 6 5 6 5 5 5
⑧ A 4 3 4 3 2 3

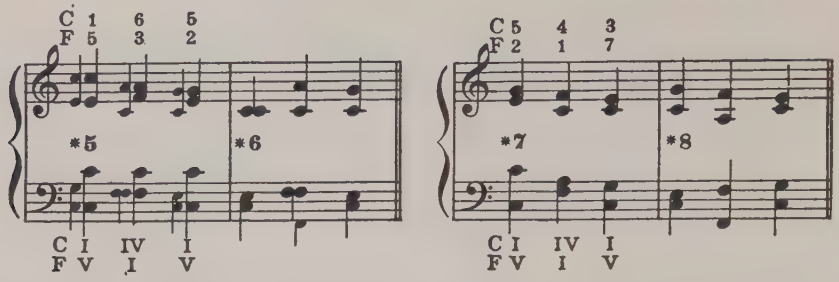
LESSON 35

Principal Triads—(*Continued*)

108. The following progressions use the same chord-schemes as those in Ill. 51, but they result in more interesting melody patterns.
The last two chords in each group connect as before.
The irregularity is in the movement from the first to the second chord.

Ill. 52





The order of the chords may be reversed—the first last and the last first—except *6 and when *1 and *2 are used as I–V–I.

All sound equally well in the tonic minors.

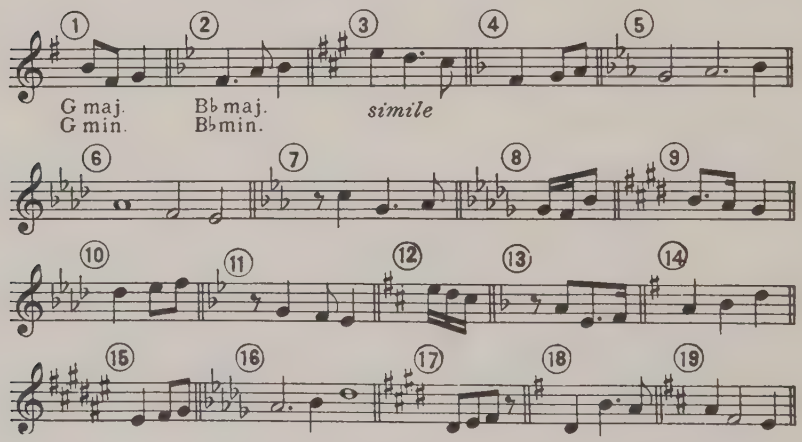
Play each pattern, forward and backward, in its four keys (exception noted above) and then transpose to other keys. Play each voice separately as well.

109. New melodic patterns are:

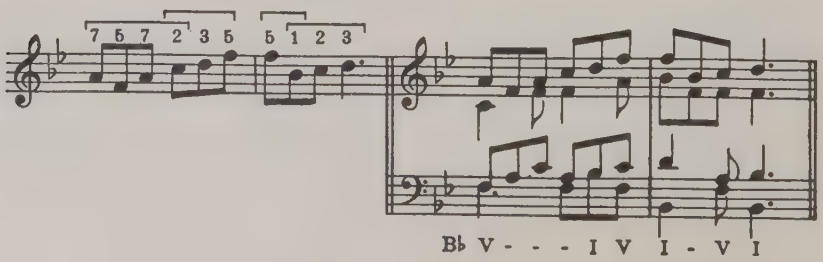
$\frac{3}{5}$ 7 · 1: 1 · 2 · 3: 4 · 5 · 6: 1 · 6 5: 5 · 4 · 3: 2 · 1 · 7: } in Maj.
3 · 2 · 1: 6 · 5 · 4: 5 · 6 $\frac{1}{}$: 3 · 4 · 5: 7 · 1 · 2: } and Min.

I - V - I: I - V - I: IV - I - IV: I - IV - I: I - IV - I: V - I - V:

Exercise 46. Harmonize the three-tone patterns, each in a major and tonic-minor key. First number the notes according to their place in the scale and refer to Ill. 52 for the proper chord successions.



Exercise 47. The patterns of this lesson may be combined with those of Lessons 33 and 34.



Write the following melodies in notes, arranging in interesting rhythmic patterns. Determine the chord-groups to be used and harmonize. (For + and −, see Par. 102.)

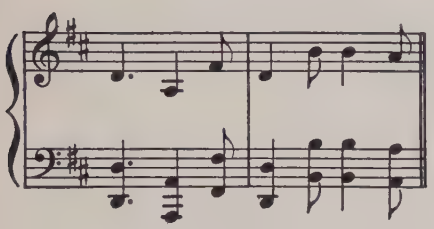
(1) E♭ −1.6.5.4.3.5.1.1.1:
(2) G +5.5.5.3.1.2.3:
(3) B♭ −5.6.1.1.1.7.1:
(4) D −1.3.5.1.1.1.2.3.4.5:
(5) E♭ −4.3.6.5.7.1:
(6) E 5.3.2.1.7.1.2.3.4.3:
(7) b min. +4.3.2.1.7.1.1.1
(8) a min. +3.7.1.6.5.4.3
(9) f min. +1.6.5.4.3.2.1
(10) c♯ min. −1.2.3.4.5.6.5.1.2.3
(11) e min. −1.5.6.3.4.3.2.1
(12) g min. −1.3.4.5.6.3.4.3.2.1

LESSON 36

Part-Writing—Analysis
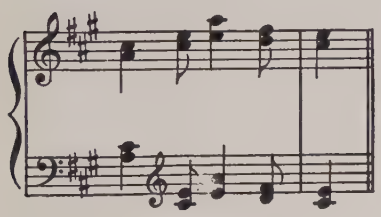
110. Any section of a musical composition is in as many parts as there are *different* voice movements. If one part is duplicated in a higher or lower register the duplication is not counted as a separate part.

Ill. 53
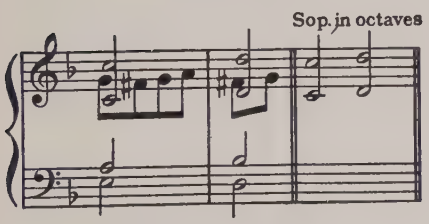


It requires three singers to produce this excerpt but all three will sing the same melody in different registers. There is but *One Part.* Described: "Sop., Tenor and Bass duplicating each other in parallel or consecutive octaves."

Ill. 54



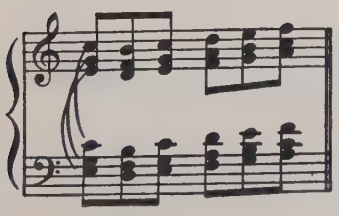
The Sop. and Tenor have the same notes an octave apart. The Alto and Bass have the same notes in octaves but different ones from the Sop. and Tenor. This is in *Two Parts.* Described: "Sop. and Alto duplicating Tenor and Bass in parallel octaves."

Ill. 55



Here there are *Four Parts* with the Sop. melody duplicated an octave lower. Described: "Sop. doubled in octaves."
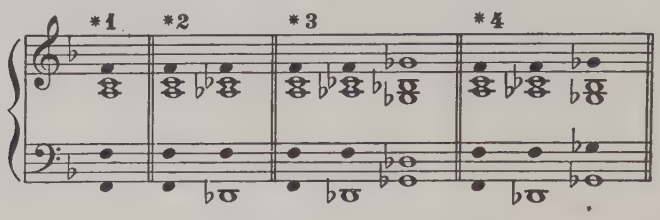
Ill. 56



The left-hand part is a duplication of the right; every part is doubled in octaves; there are only *three* different *parts.* Described: "Sop., Alto and Tenor moving in parallel 3rds, 4ths and 6ths, and each part duplicated an octave lower."

111. The number of notes showing in a single chord does not depict the actual number of parts. Duplication is proven only when notes in octave or unison actually *move* to a different octave or unison. An octave or unison may be repeated indefinitely without suggesting duplication or otherwise.

Ill. 57



*1 Shows five notes with F tripled. This might be in three, four or five parts.

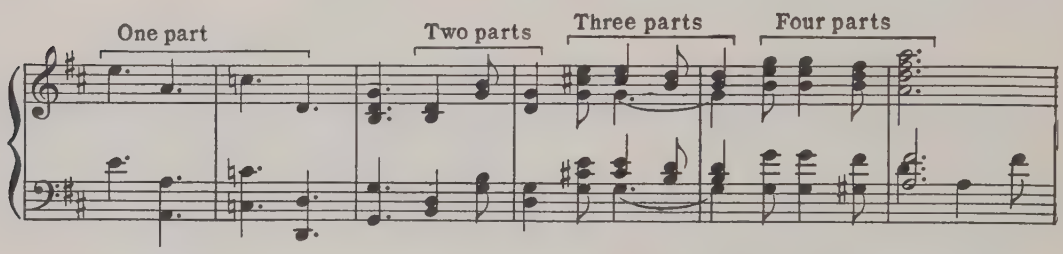
*2 Two of the F's repeat into a new chord; the other moves to a new note. This illustration might be in four or five parts but not three.

*3 All of the F's have finally moved to different notes, proving five parts.

*4 The two F's move to another octave G. This proves duplication so the illustration is in four parts.

112. The number of parts and the extent of duplication are matters the composer has decided. There is no obvious consistency as a piece will show abrupt and frequent changes in both details. Each section must be analysed separately as being in a particular number of parts.

Ill. 58



Exercise 48. Rewrite sections of any reasonably simple standard work (Schumann's "Album for the Young" or a Sonatina album), eliminating all duplication of parts. Arrange the rewritten sections in Score—each part on a separate staff.

LESSON 37

Consecutives. IV–V
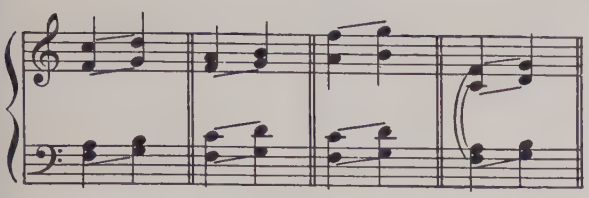
113. *Rule: In four-part harmony, parallel 5ths, 8ves and unisons are forbidden.*

As shown in the preceding lesson, parallel 8ves and unisons are freely used. But when a definite number of parts is called for, such progressions destroy the independence of the parts.

Parallel 5ths are usually unpleasant in effect. Instances will be shown and certain kinds permitted later. For the present, all *Consecutives* (parallel 5ths, 8ves and unisons) will be considered as blunders.

114. The connection of IV with V is affected by the above.

Ill. 59

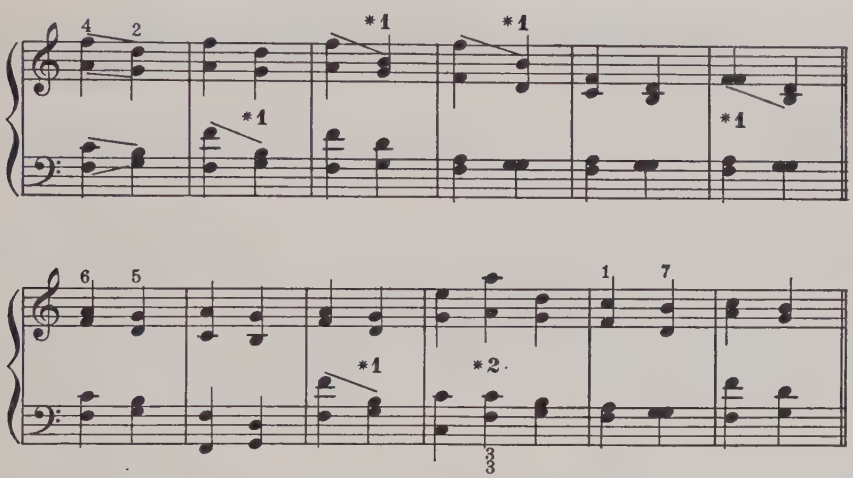


These are wrong because of 5ths and 8ves which result from all four voices having moved in parallel motion.

115. The correction is:

Rule: In IV–V or V–IV the Sop., Alto and Tenor must move in a motion contrary to that of the bass.

Ill. 60



The contrary motion should be to the nearest available note.

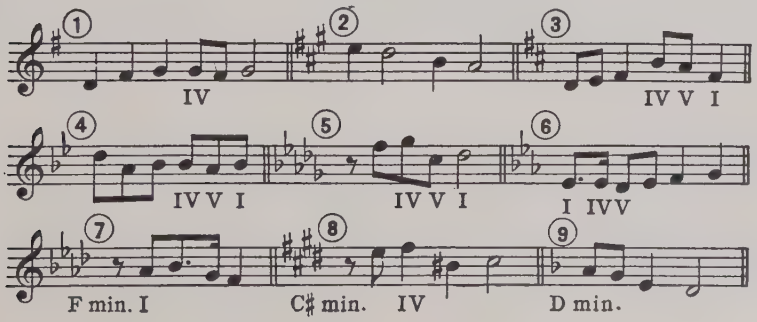
At *1 the tripled root in IV necessitates one voice skipping down a diminished 5th.

The doubled 3rd in IV at *2 is made necessary by the leap to the Sop. 3rd. Note the indication $\frac{3}{3}$.

116. New melody patterns are evolved:

1 . 7	4 . 2	6 . 5
IV–V	IV–V	IV–V
also (I –V)		also (IV–I)

Exercise 49. The following combine old patterns with the new ones. Number the notes as scale degrees; refer to this and preceding lessons for the conventional chord-groups and harmonize.



Exercise 50. Arrange the following in rhythmic measures, using notes for the figures, and harmonize.

(1) F+5.6.5.5.3.4.7.1
I V I

(2) E♭+3.4.2.3.1.5.6.5.3
IV V

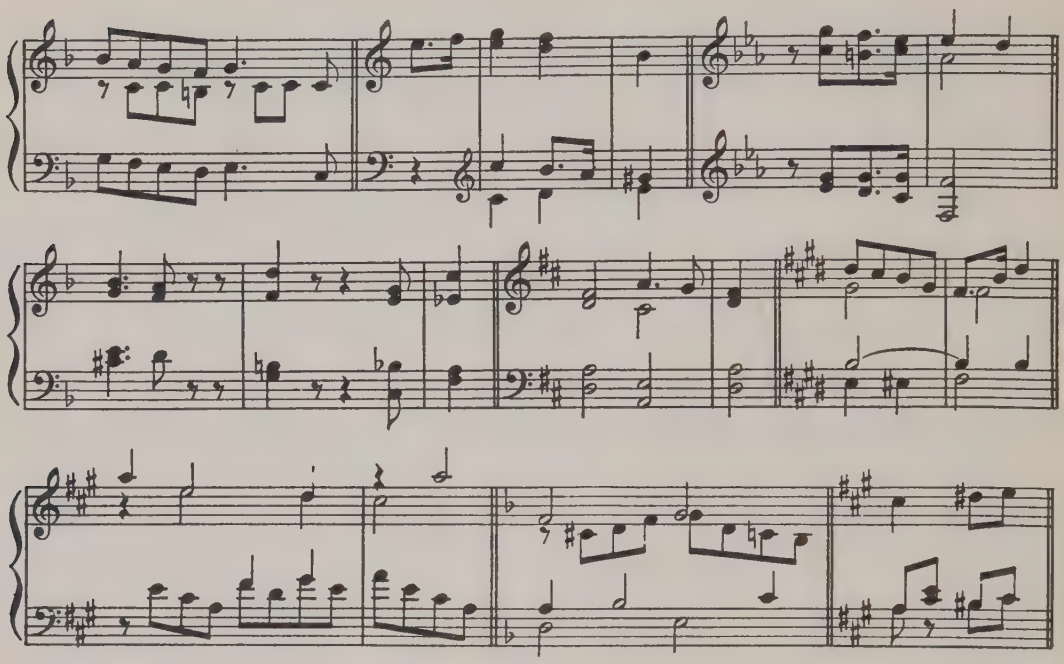
(3) A♭+5.4.2.3.6.5.5
V I

(4) b min. 1.2.3.4.7.1

(5) d min. 5.6.5.3.6.5.3
I V V I

(6) c♯ min. 5.3.2.1.6.5.5.3.4.7.1
IV V I I

Exercise 51. The following are from standard piano pieces. Find instances of parallel 5ths, 8ves and unisons.

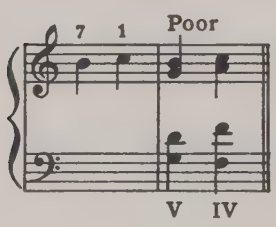


LESSON 38

V—IV
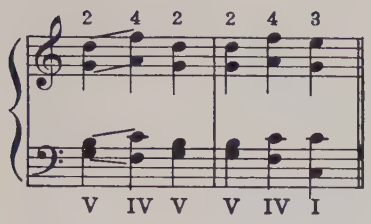
117. V to IV is an unnatural progression, inferior to those already explained. If used, the Sop., Alto and Tenor must move contrary to the bass and the root of either chord must not be tripled.

Ill. 61



It is altogether wrong if the melody is 7.8.

Ill. 62
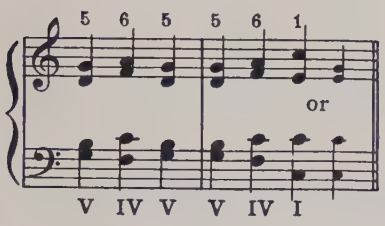


It is best in a three chord-group.

V–IV–V or V–IV–I.

with the melody patterns

2 . 4 . 2 or 2 . 4 . 3

Ill. 63
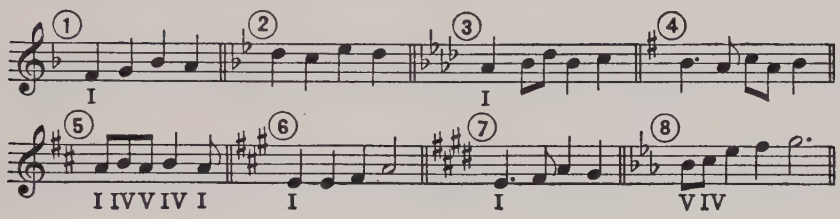


This is possible but not as good as the above.

5 . 6 . 5 V–IV–V or I

5 . 6 . 1 V–IV–I

Exercise 52. Harmonize in the given key and tonic minor, following previous directions:



Exercise 53. Harmonize:

(1) E—1.2.3.2.4.3.2.7.1:
I

(2) D—1.6.5.3.1.2.4.3:
I

(3) b min. 1.4.3.5.5.6.5.3
I I V V I

(4) d min. +1.1.1.6.5.6.5.5
IV V I

LESSON 39

Melody Harmonization—General Rules

In melody harmonization the chord-groups already explained, as well as later ones, are to be used as occasion warrants. But inasmuch as it is humanly impossible to list or memorize the infinite variety of conceivable groups, a few general rules will be given.

118. (a) The chord on the first strong beat of an exercise should be **I.** A melody beginning on a weak beat may use V if the tone is contained in that chord. (Ex. 55, Melodies 3 and 9.)
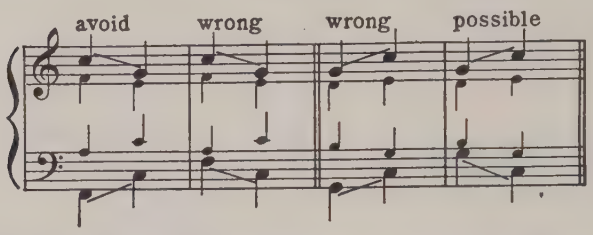
(b) The last two chords should be V–I (called *Authentic Cadence*). IV–I (*Plagal Cadence*) is an occasional ending, either substituting for V–I or following immediately after the Authentic Cadence, acting as an "Amen."

119. (a) Avoid a selection which results in successive chords having their fifths in the soprano.

Consecutive 5ths in parallel or contrary motion are thus avoided.

(b) Successive roots in the soprano occur rarely and then only if the bass and soprano move in contrary motion.
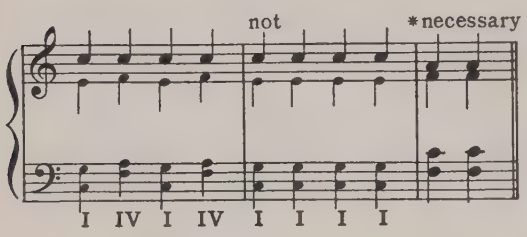
Ill. 64



120. A skip in the melody or a series of skips along an acceptable chord line should be harmonized with one chord. (See Lesson 33.) A skip of a third, while permitting chord repetition, does not demand it.

121. A repetition of a melody-tone is relatively uninteresting. Offset this by changing the chord with each repetition.

Ill. 65

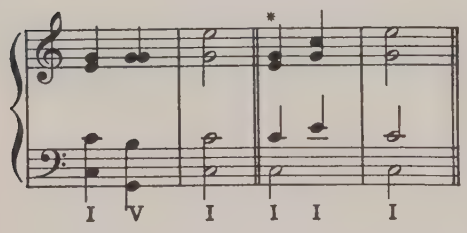


If the available chord material admits of but one chord, the rule cannot apply.

* As only I, IV and V are available, IV is the only chord containing the melody-tone.

122. The strong beat of a measure should have a chord different from that of the preceding beat.

Ill. 66

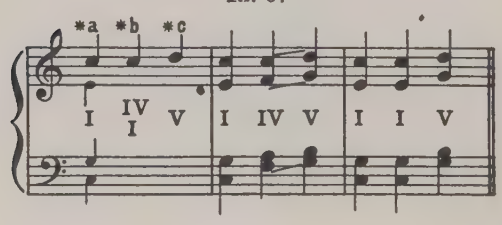


Exceptions: (a) The first chord of a phrase or motive may be the same as that which ended the previous one.

(b) A chord beginning on one accent may repeat into the next accent. (See *.)
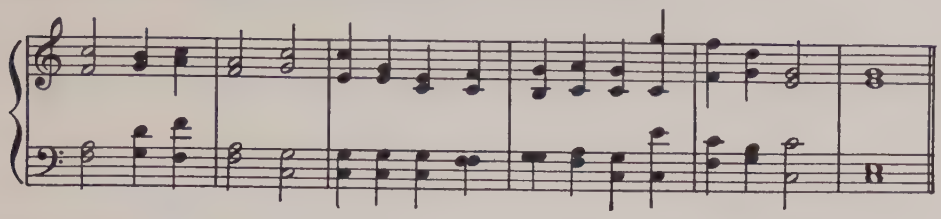
123. Rules will conflict—in such cases consider that a negative rule ("Do not" or "It is forbidden" or "Avoid") is the more important. Former rules for the doubling, omission and distribution of chord-tones and those for consecutives will strongly influence chord selection and a look ahead in the melody will often decide an earlier choice.

Ill. 67

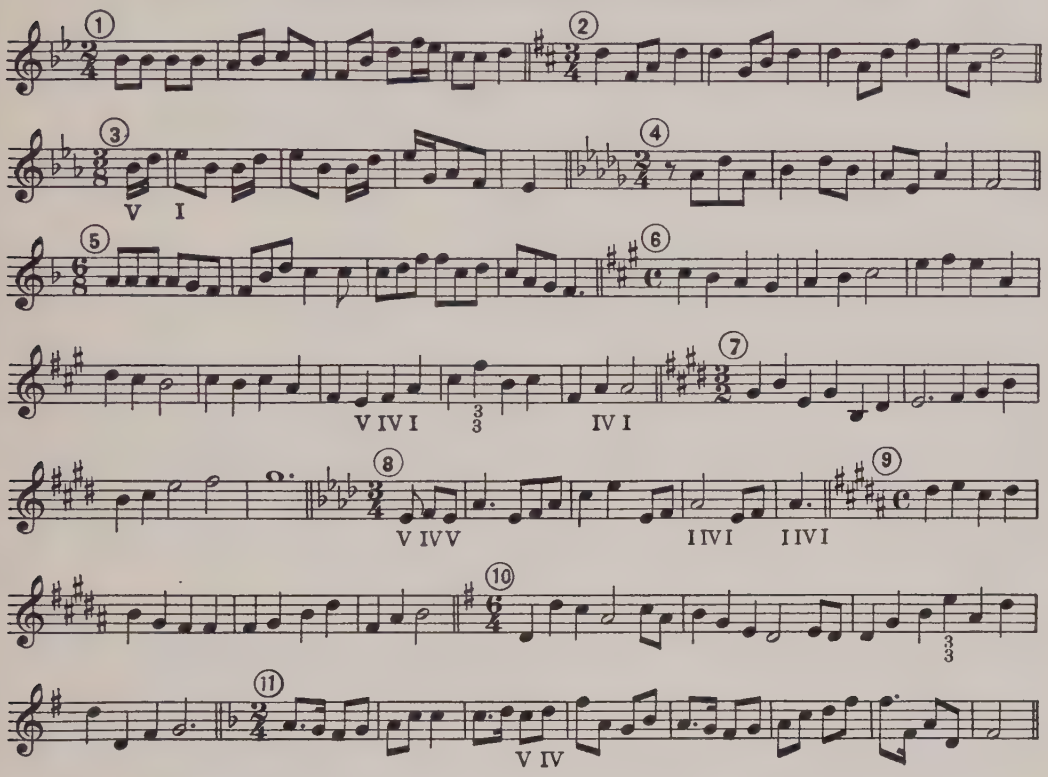


At *a I is necessary. Par. 118a.
*b Could be I or IV.
Should be IV. Par. 121.
*c Has to be V.
IV–V will cause consecutives. (Par. 113.)
Therefore *b will have to be I, breaking the less important rule.

Exercise 54. Find every mistake in the following:



Exercise 55. Harmonize the following melodies, using I, IV and V:



LESSON 40

IV–V: V–IV of Minor

124. There are four augmented intervals in the minor scale (as contrasted with the one in the major).

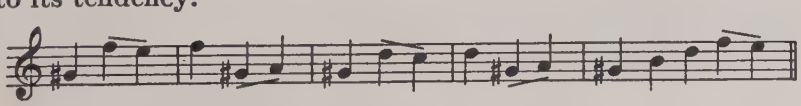
These four invert into diminished intervals.

They result from the combination or successive use of active scale-steps.

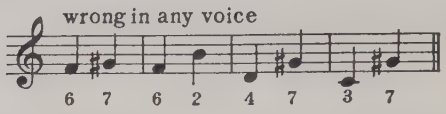
The tendency of active steps is more urgent in the minor than in the major scale.

If two active steps are sounded together, usually both have to move according to their individual tendency.

If several active steps are sounded successively, only the last one need concede to its tendency.

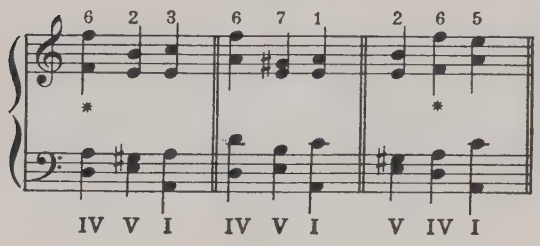


But the tendency of the first of two successive active steps must be humored to the extent of skipping *from it in the direction of its tendency.*



125. A concession to these natural laws is embodied in the rule—
No voice-leading of an augmented interval is permitted.
Observance of the rules for IV–V and V–IV will result in an automatic observance of the new rule.

Ill. 68



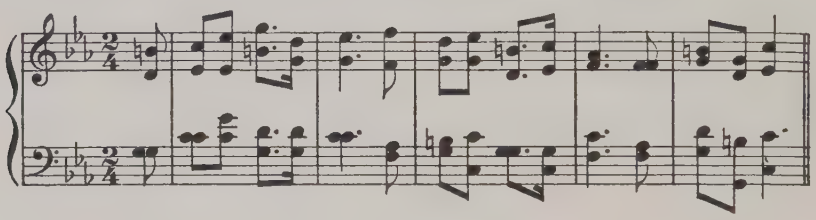
New Melody Patterns:



Note that at * the 3rd of IV is doubled.

126. In skipping *to* an active step, consider it physically: "Reach *up* and pull it *down;* Stoop *down* and pull *up.*" Skip *up* to an active step that has a downward tendency; skip *down* to an active step that has an upward tendency.
This rule is not strictly enforced when use of successive tones of one chord is involved. Nor does it apply to a skip of a third.

Exercise 56. Point out all mistakes in the following:



Exercise 57. Write out in notes, rhythmically arranged, and harmonize:

G min. 1 2 3 6 7 1
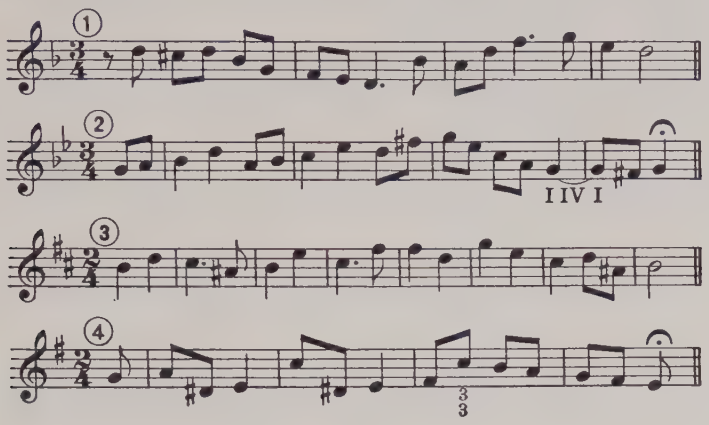
F min. +5 4 3 2 6 * 5

B♭ min. 1 2 * 6 5 7 2 1

F♯ min. +1 5 * 6 2 3 7 1

(* See Ill. 68.)

Exercise 58. Harmonize the following, using only I, IV and V:



LESSON 41

Given Bass—I, IV, V

127. The particular problem in harmonizing a given bass is that of producing a good melody.

The given notes are roots of triads. The figures 8, 5, 3 have been explained (Par. 101). Where no figure is shown, either the natural progression of the previous chord makes one unnecessary or the choice is left to the pupil.

Where there is a choice of melody-notes, the concern should be for the best melodic results.

All previous rules and recommendations are in force.

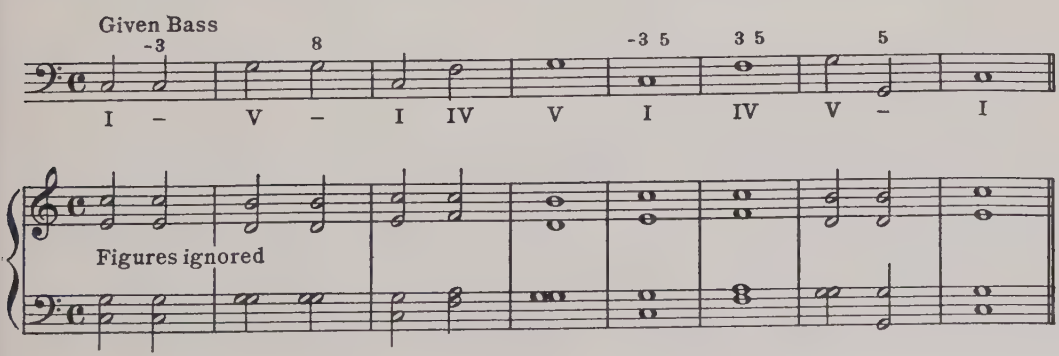
128. (a) The best sounding position of a triad is that with the 3rd in the soprano. This does not preclude the other positions but often influences a choice.

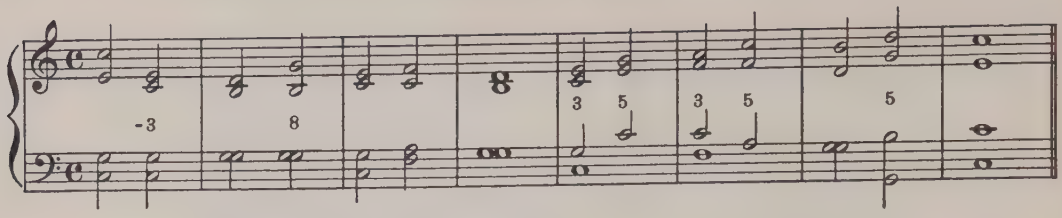
(b) The melody usually ends on the tonic of the scale, occasionally on the mediant.

(c) The immediate recurrence of a melody-tone should be rare. Avoid it altogether if the chord is repeated.

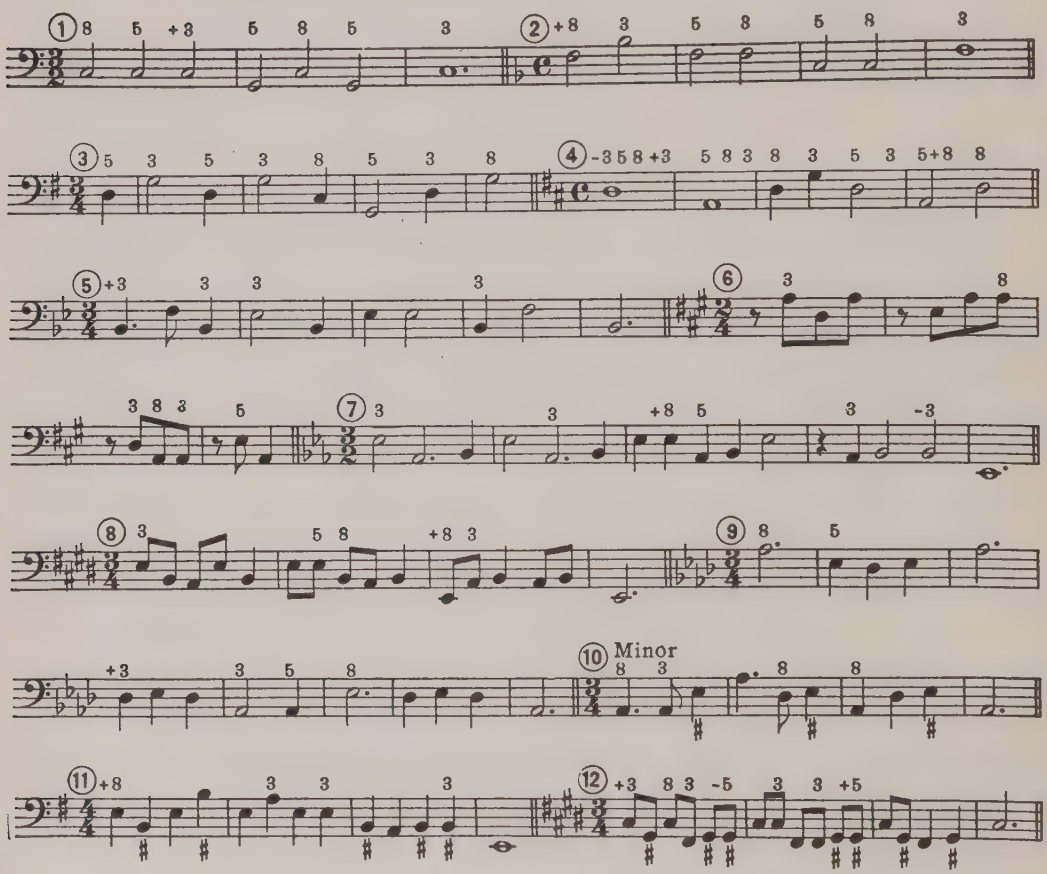
The following illustrates two correct solutions of a given bass—the first monotonous melodically, the other as interesting as the limited material permits:

Ill. 69





Exercise 59. Add a soprano, alto and tenor to the following basses: The accidentals below the given notes in the three last exercises indicate that the *third above the bass* is to have the accidental. In the present instances, the notes affected are leading-tones of minor keys.



LESSON 42

Modulation—Analysis

129. *Modulation* consists of moving from the tones of one key into those of another.

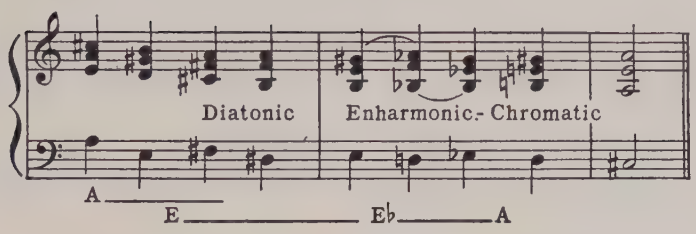
It is unusual to find a composition, even of the simplest character, that remains in one key throughout or for even as long as eight measures. A problem of analysis is to identify the key changes and a task of practical harmony to develop a technic of modulation employing all the varied means and moving freely from any key to any other.

130. Modulations are *Diatonic*—when the final chord of one key and the first chord of the new key are both found in some one key.

Chromatic—if the condition made for Diatonic modulation is not present.

Enharmonic—a term qualifying both the Diatonic and Chromatic means, used specifically if two successive tones have the same pitch but different notations.
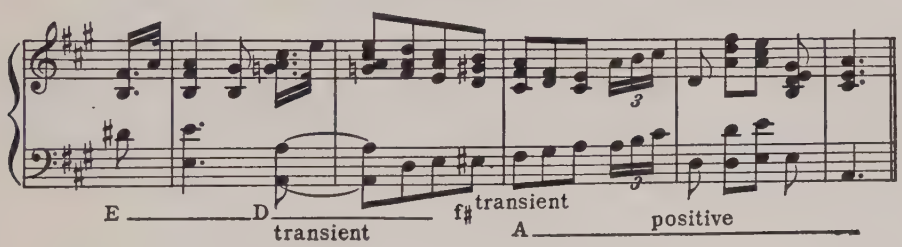
Ill. 70



131. Modulations are *Positive* if the key attained is firmly established by a series of chords characteristic of it alone or

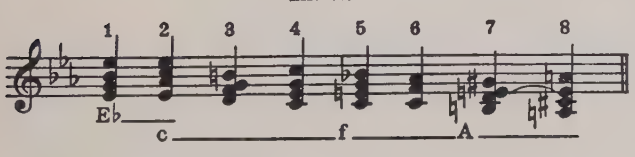
Transient if through a key which is but briefly heard and serves as a stepping-stone to still another key.

Ill. 71



132. The following plan may be used (for the present) in determining changes of keys in either exercises or compositions. The chords are to be recognized as clusters of scale-tones. The task is to identify the scale involved. It takes at least two of the clusters to form a modulation. One chord might prove that the old key has been left. Two or more must be analysed to assemble sufficient scale-tones to prove the particular key reached.

Ill. 72



Chords 1 and 2 are in the key of the signature, E♭.

Chord 3 introduces a raised tone, b♮ which is likely to be a leading-tone.

Chord 4 proves that b♮ *is* a leading-tone, for 3 and 4 contain tones found only in C minor.

Label 3 and 4 as C minor. Look back at 2. Every tone is found in C min., so label it as belonging to both the old and new keys.
The modulation is *Diatonic.*

Chord 5 contains a lowered tone b♭ and a raised tone e♮. A lowered tone is liable to be 4 of a scale. This proves to be the case here because both

Chords 6 and 5 are found only in F min.

Look back at 4. Could it belong to F min.? No.

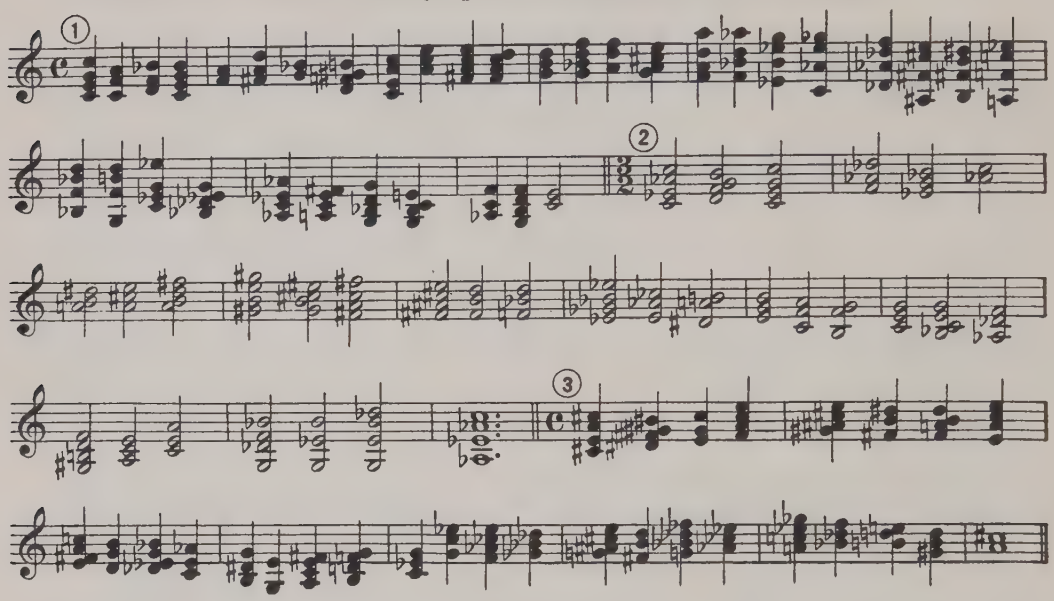
The modulation is *Chromatic.*

Chord 7 Three of the tones contradict F min. The sharp most advanced in the series of "sharp" keys is g♯, belonging to either A maj. or A min. But

Chord 8 is not A min. because of the C♯. It corroborates chord 7 as A maj. and both 7 and 8 are so labeled.

The modulation is characterized by A♭ of 6 becoming G♯ of 7. It is an *Enharmonic* modulation.

Exercise 60. Name the keys passed through in the following:



LESSON 43

Key Relationship—Diatonic Modulations to Related Keys

133. A composition is in some central key which is departed from and returned to as the composer wills. The keys passed through are described as having a relationship to the central key, the degree of relationship being gauged according to the number of scale-tones possessed in common by both the new key and central key.

134. The nearest related are those whose signatures have one sharp or flat more or less than the central key.

C maj. related group:			C min. related group:		
F	C	G	f	c	g
d	a	e	A♭	E♭	B♭

(Large letters represent maj. keys; small letters represent minor keys.)

135. In reference to the central key, the new ones are named as Mediant Maj., Dom. Min., etc., according to which tone of the central key is scale-step 1 of the new.

The following abbreviations may be used in analysis to designate relationship:

T	= Tonic maj.	The same letter but in small capitals will indicate *Minor* keys:	
ST	= Super-tonic maj.		
M	= Mediant maj.	SM	= Sub-med. minor.
SD	= Sub-dom. maj.	L	= Leading-tone minor.
Dm	= Dom. maj.	etc.	
SM	= Sub-med. maj.		
L	= Leading-tone maj.		

For example: D maj. is ST of C. The scale-tonic of D is the super-tonic of C.

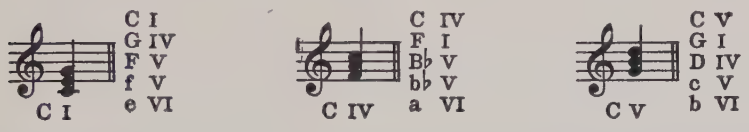
The symbols + and ° following the letters will indicate a raised or lowered scale degree.

T^+ = Maj. key on raised first degree.	C♯ maj. is T^+ of C.
M° = Min. key on lowered third degree.	E♭ min. is M° of C.

In this text, following this chapter, only the larger capital will appear, either modified—T maj., SD min., etc.—or, where there is no need of such, simply as T, ST, etc.

136. In the principal triads of a maj. key are found triads of

T ST SD Dm L°
T M SD SM L° L

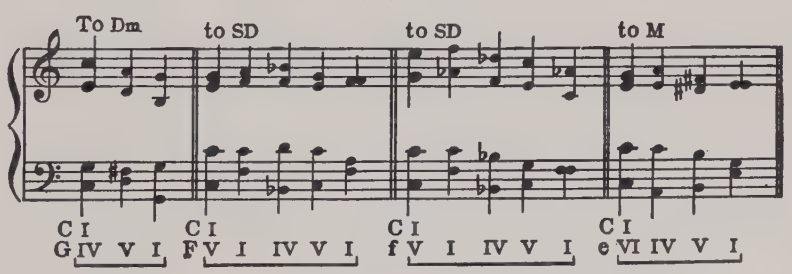


137. To put this to practical use, modulations will be required from a given key to all others so related to it as to have triads identical with its I, IV or V. Proceed as follows:

Analyse I, IV and V of given key to find the other keys. (As shown above.)

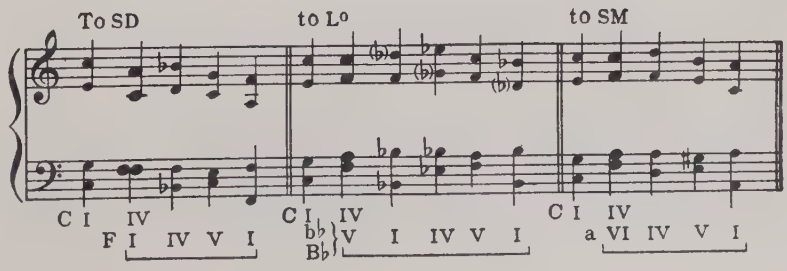
Ill. 73

Write I of given key.
Label it IV, V or VI of new key.
If IV, end V–I of new key.
If V, end I–IV–V–I of new key.
If VI, end IV–V–I of new key.
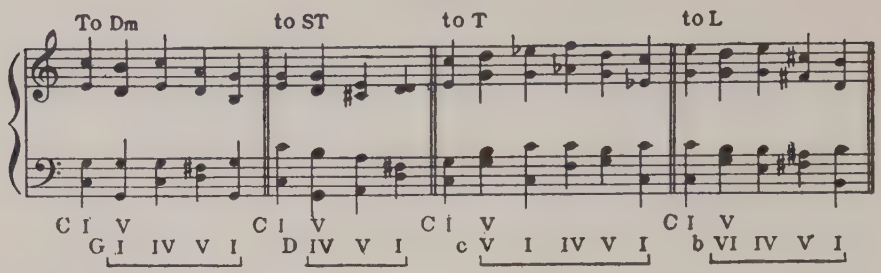


Ill. 74

Write I–IV of given key.
Label IV as I, V, or VI of new key.
If I or VI, end IV–V–I of new key.
If V, end I–IV–V–I of new key.



Ill. 75

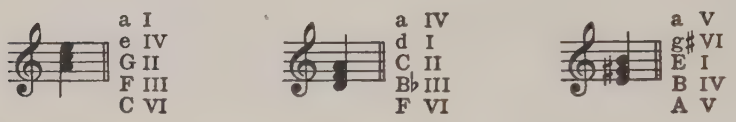


Write I–V of given key.
Label V as I, IV, V or VI of new key.
Proceed as in other formulæ.

Exercise 61. Write modulations from as many "given keys" as the attainment of fluency requires to all keys found in the **I, IV** and **V** of each given key.

138. In I, IV and V of a minor key are found triads of:

T	ST°	ST	M		Dm	SM	L°
T				SD	Dm		L



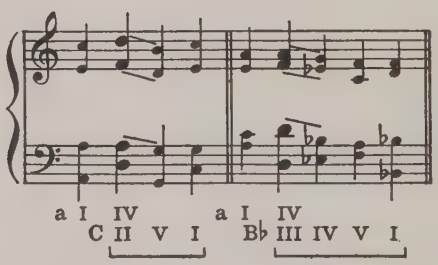
The procedure of modulation is the same as from the major but the use of a triad as a II or III is a new feature.

If the common triad is II of a new key, end with V–I.

If the common triad is III of a new key, end with IV–V–I.

In the progressions II–V and III–IV, the Sop., Alto and Tenor *descend* to the nearest tones.

Ill. 76



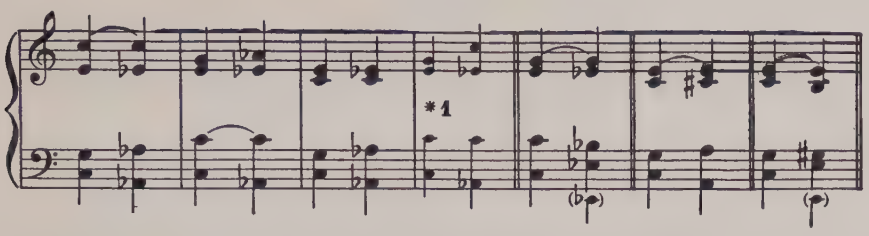
Exercise 62. Write modulations as directed in Ex. 61, but from given minor keys.

LESSON 44

Modulation—Chromatic

139. Major triads whose roots are a maj. or min. 3rd apart connect smoothly and with good effect. This makes possible a progression from one maj. triad to any of four others, causing a direct modulation, the second triad not being found in any key containing the first.

Ill. 77

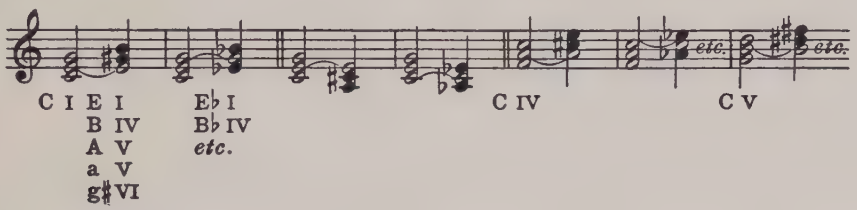


It must be noted above that, in each pair of triads, the common tone remains in the same voice, the bass skips a third (or sixth), one voice moves one degree and another a chromatic semitone. Any interval, root, 3d or 5th, of the first chord may be in the Sop., but the most usual melody tone is the one common to both chords.

*1—This is good but its use may be reserved until later.

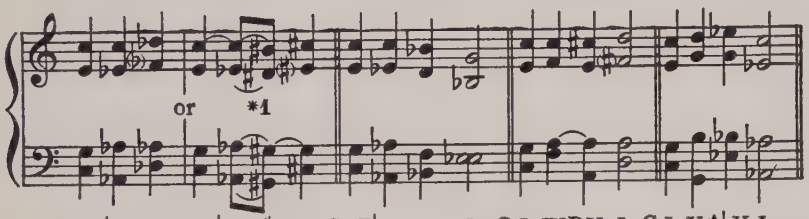
140. Modulations will be required from a given key to all other keys made possible by the new connections.

Write the major triads of the given key and the four triads which may follow each. Analyse the latter.



With this showing the new keys and Ill. 77 as a guide to the voice-leading, modulations from C (in part) are:

Ill. 78
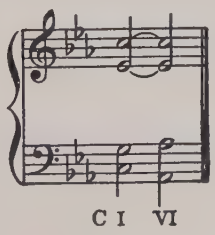


*1—Observe the manner of enharmonic re-notation which changes the key of D♭ into C♯.

141. The modulations should be adapted to the following formulæ:

1st Key			New Key
Maj.	I or I–IV or I–V	to	Maj.	I–IV–V–I or IV V–I or V I
Min.	I–V or I–VI		Min.	V I or VI–IV–V–I

In modulating from the minor a new connection will be that of I to VI. Follow the simple rule—common tones remain in the same voice.



Exercise 63. Write all the modulations possible after the formulæ of this lesson from some one given major key and also from some given minor key.

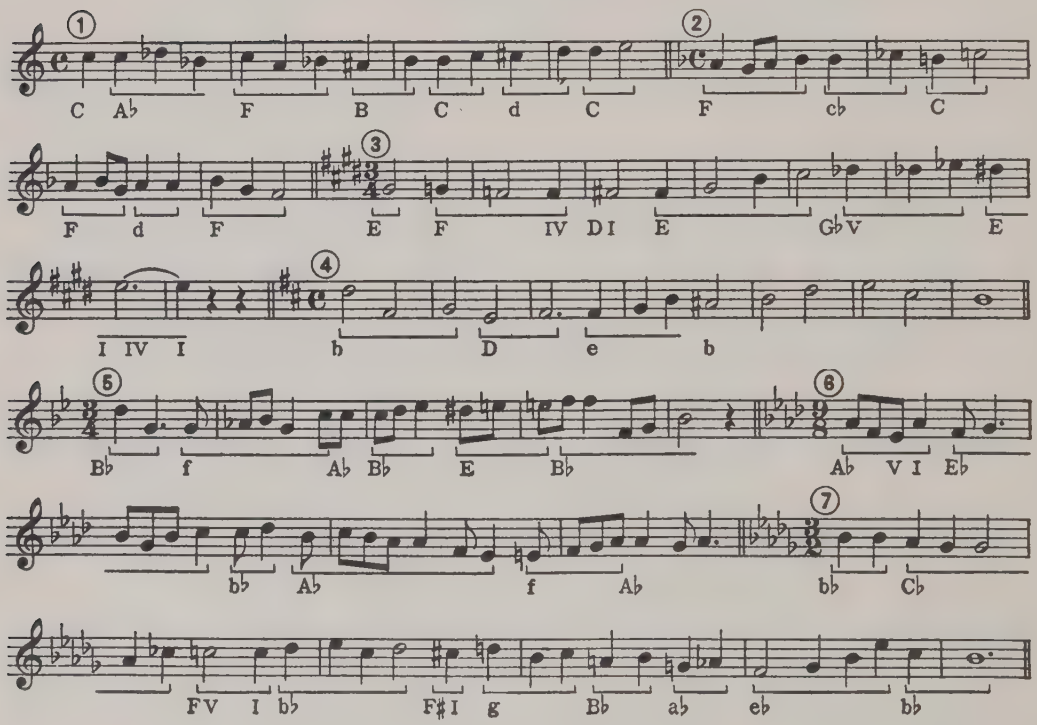
The assignment may be diversified as follows:

(a) I of given key
(b) I–IV of another given key
(c) I–V of still another key
(d) I–V of some minor key
(e) I–VI of another minor key

} to new key.

Exercise 64. The following melodies apply the principles of Lessons 43 and 44. As complex as they *look* they call only for the chord progressions and voice-leading explained in earlier lessons with the added feature of requiring them in several keys instead of just one.

Use I, IV and V of the various keys. Mark each modulation as Diatonic, Chromatic or Enharmonic. In the case of a Diatonic Mod., give the last chord of the old key the double designation shown in Ill. 75 and 76.

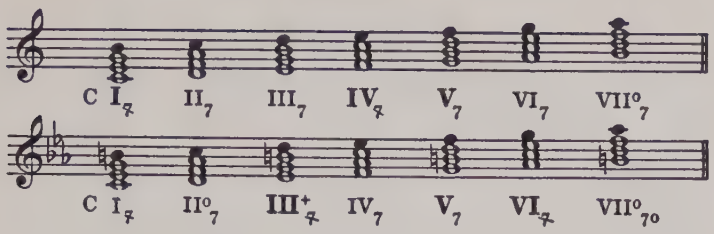


LESSON 45

7th Chords (General)

142. Seventh Chords can be constructed on every scale degree and take their names from the degree acting as root: Tonic 7th, Dom. 7th, etc.

Ill. 79



143. Analysed, each contains some kind of a triad plus a 7th.

Maj. Key	Min. Key	
I_7 IV_7	VI_7	Maj. triad + Maj. 7th
II_7 III_7 VI_7	IV_7	Min. triad + Min. 7th
V_7	V_7	Maj. triad + Min. 7th
	$VII°_7$	Dim. triad + Dim. 7th
$VII°_7$	$II°_7$	Dim. triad + Min. 7th
	I_7	Min. triad + Maj. 7th
	III^+_7	Aug. triad + Maj. 7th

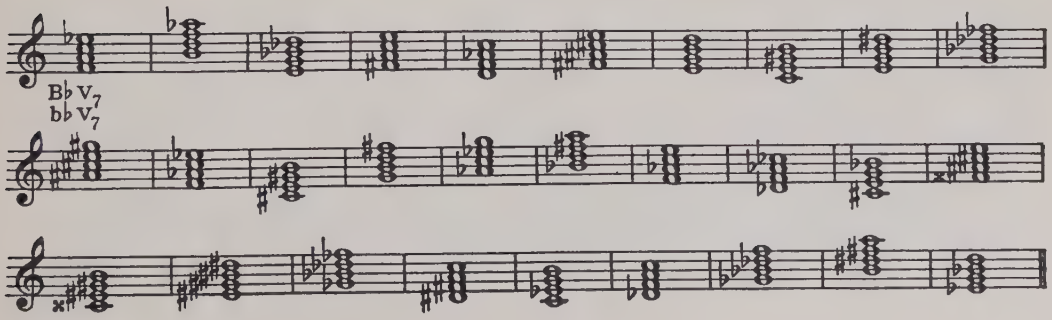
The plan of indicating the *Triad* is as explained in Par. 89.
The character of the 7th is shown by:

7 for major.
7 for minor.
7° for diminished.

The distinctive indications will not be used in this text after this lesson. However, the pupil will be expected to use them in all analysis work.

144. From the tabulation in Par. 143 it follows that, for instance, a chord with a maj. triad and maj. 7th could be I_7 or IV_7 of a major key or VI_7 of a minor key; a chord with a maj. triad and min. 7th could be V_7 of either a major or minor key.

Exercise 65. Analyse the following and name the keys containing each. Indicate by the letter-name of the key and the Roman and Arabic numerals.

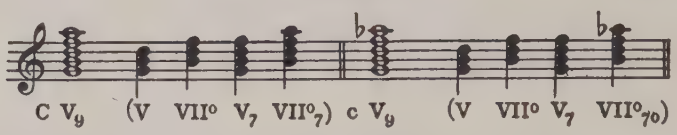


LESSON 46

Dominant 9th

145. This text will deal with only one 9th chord—that built on the dominant of the scale—V_9.

Ill. 80

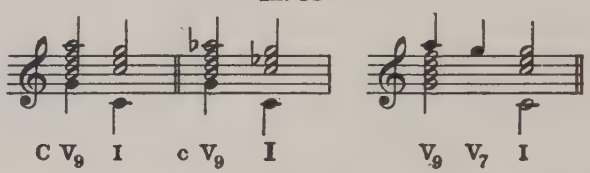


Compare the V_9 of the major with that of the minor. In what respect are they different? It will be noted that V_9 contains two triads, V and VII°, and two 7th chords V_7 and VII°$_7$.

146. Its root is an inactive scale degree (5) while the rest of the chord is made up of all the active steps (7, 2, 4 and 6).

The natural movement of these active steps results in the progression V_9–I. More often the V_9 moves into V_7 and then resolves to I.

Ill. 81



Exercise 66. (a) Write the V_9 of every major and minor key and the chords contained in it (as in Ill. 80. No signatures.)

(b) Write and play the progression V_9–I in every key, using Ill. 81 as a pattern.

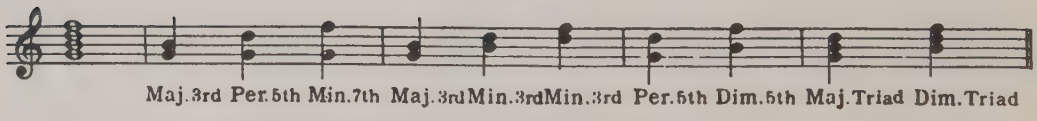
LESSON 47

Dominant 7th—Analysis

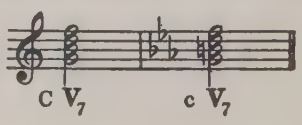
147. The most important and most used of all seventh chords is that built on the dominant—the Dominant 7th—V_7.

It has a Maj. 3rd—Per. 5th—Min. 7th.
Maj. 3rd and two Min. 3rds.
Perfect 5th and Dim. 5th.
Maj. triad and a Dim. triad.
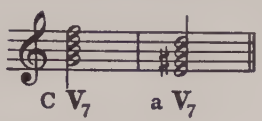
Ill. 82
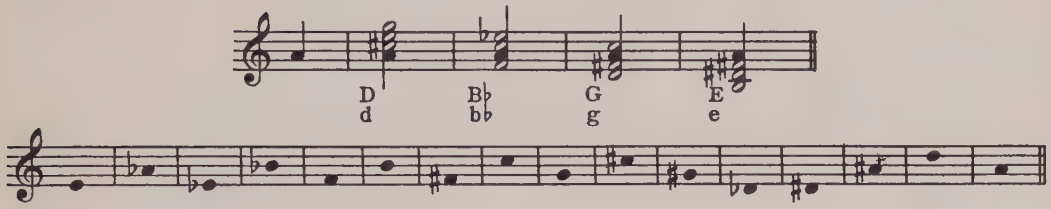


Each one belongs to a Major and its Tonic Minor key.



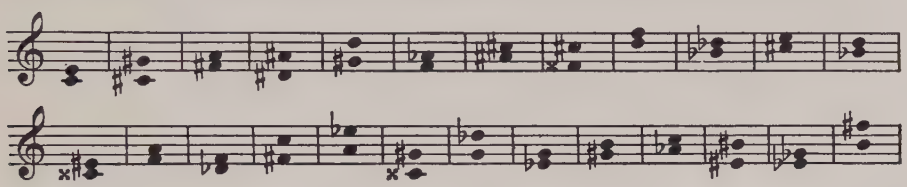
Exercise 67. Write the V_7 of every Major key and its Relative Minor.



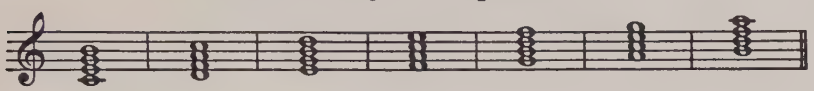
Exercise 68. Every note is a root, 3rd, 5th and 7th of a V_7.
Write every V_7 chord containing the following notes. Name the keys of each:



Exercise 69. Write every V_7 containing the following intervals:



Exercise 70. By raising or lowering the notes a half-step chromatically, make as many V_7s as possible out of each of the following:



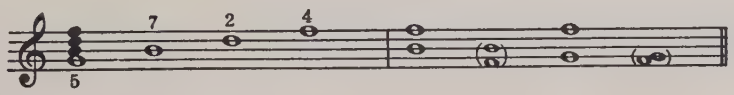
LESSON 48

Dominant 7th—Resolution

148. The Dominant 7th chord is built on the inactive scale-step 5 and contains the active steps, 7, 2 and 4.

It also contains two dissonant intervals: a Dim. 5th (Aug. 4th) and a Min. 7th (Maj. 2nd).

Ill. 83

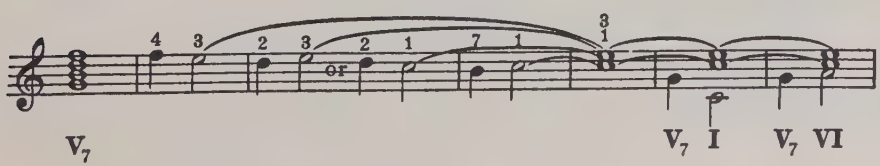


149. The simultaneous movement of the active steps (Par. 54a) and the resolution of the dissonant intervals (Lesson 24) results in the interval formed by steps 1 and 3.

Scale-steps 1 and 3 belong to the triads I and VI.

To complete the triads, the root of V_7 moves to the root of I or VI.

Ill. 84



Exercise 71. Analyse the following. Observe that the active steps move according to their tendency and that the only difference between V_7 I of the Maj. and V_7 I of the Min. is in the 3rd of I.

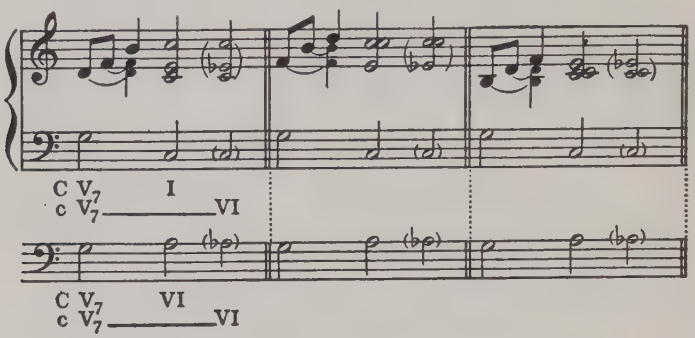
What difference is there between V_7–I and V_7–VI?

Note also that the natural movements of the active steps result in I having no 5th.

Write out these transpositions in every key. (See Ex. 32.)

Play them in every key.

Obviously the treble staff is to use each bass in *turn*.
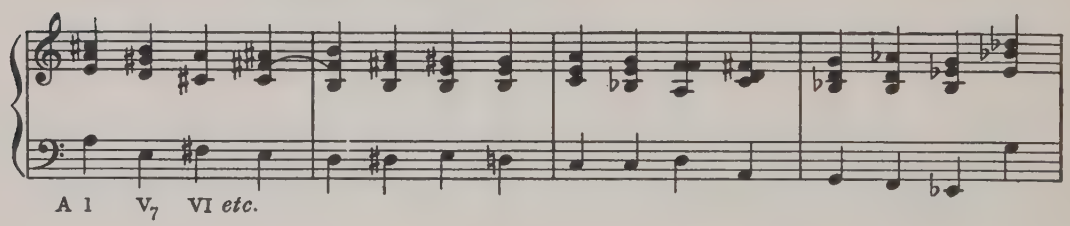


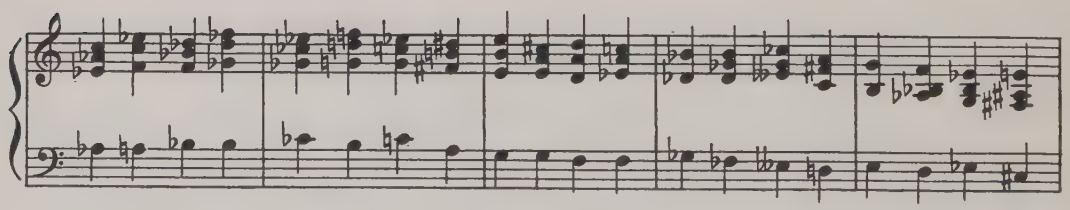
Exercise 72. Analyse, naming chords and keys. Reason as follows:

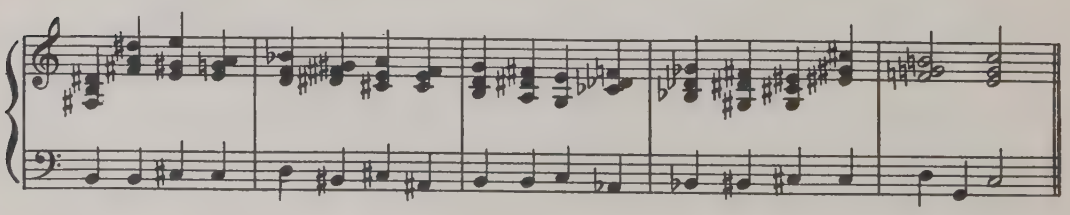


First chord is a V_7 of D maj. or D min.
Second chord is found in D min. but not D maj.
The analysis is D min. V_7–VI.

Classify each modulation according to Par. 130.







LESSON 49

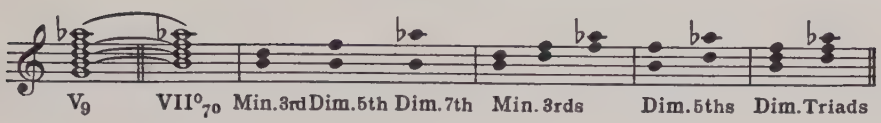
VII$^{\circ}_{7}$ of Major and Minor—Analysis

150. The Dom. 9th without its root forms a seventh chord built on the leading-tone. In a major key this chord is called a *Leading-Tone Seventh.* In the minor it is called a *Diminished Seventh.* The latter is by far the more important.

151. A Dim. 7th chord (VII$^{\circ}_{7}$) contains:
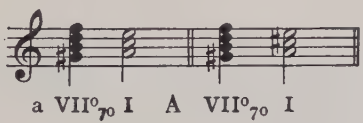
a Min. 3rd—Dim. 5th—Dim. 7th.
Three minor 3rds.
Two diminished 5ths.
Two diminished triads.

Ill. 85
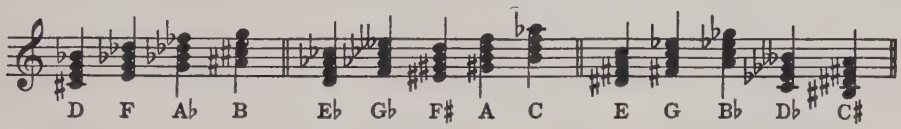


152. It properly is VII$^{\circ}_{7}$ of a minor key, *but frequent usage in the Tonic major has made it a practical chord in both minor and major. It should be classified according to its resolution.*

Ill. 86



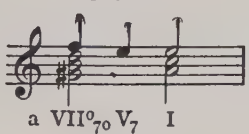
153. *There are but three different (in sound) Dim. 7th chords. Each is enharmonic with three or more others.*

Ill. 87



154. Its resolution is to the I of its key but often it moves into V_7, which then resolves to I.

Ill. 88

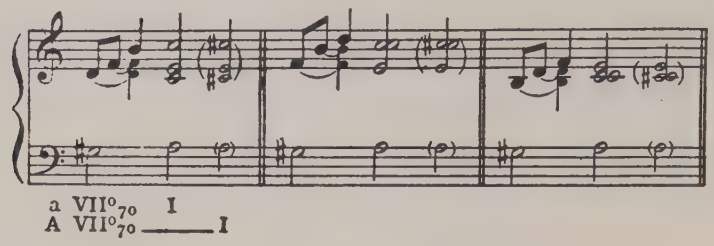


Exercise 73. (a) Write every VII$^{\circ}_{7}$ containing the notes given in Ex. 68. Name the keys of each.

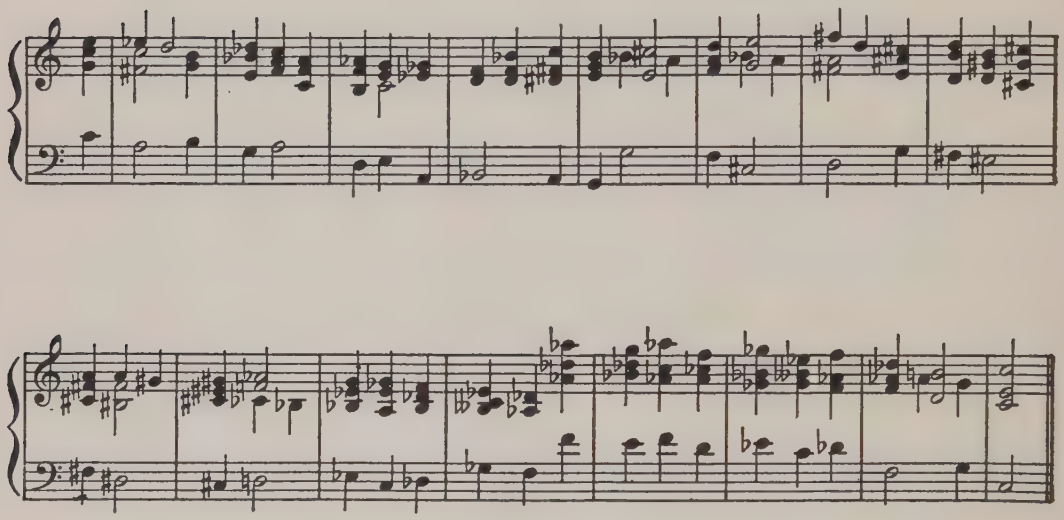
(b) Write every VII$^{\circ}_{7}$ containing the minor and dim. intervals given in Ex. 69. Name the keys.

(c) Following the directions of Ex. 70, make as many Dim. 7ths as possible out of the given chords. Name the keys.

Exercise 74. Compare the VII°$_{7}$-I progression with the V$_7$–VI in Ex. 71. Write and play in every key.



Exercise 75. Following the plan of Ex. 72, analyse the following, naming the chords and keys and describing the modulations according to Par. 130.



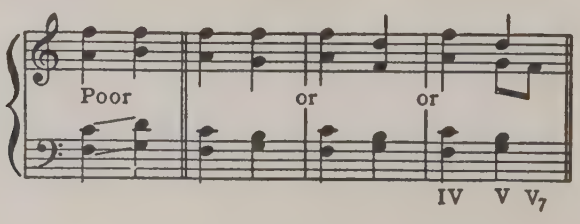
LESSON 50

Melody and Bass Harmonization Using V$_7$

155. In four-part harmony, V$_7$, root in bass, may use all intervals (root, 3rd, 5th and 7th), or the 5th may be omitted and the root doubled. The choice is dictated by melodic or harmonic succession or by the necessity of avoiding incorrect progressions.
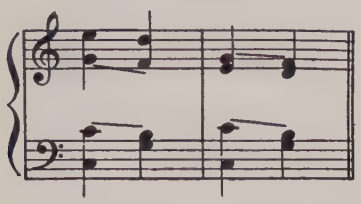
156. (a) In IV–V$_7$ it is usually better to omit the 5th.

Ill. 89



(b) In V–V_7 all the privileges of chord repetition are granted.
(c) In I–V_7 the same possibilities and restrictions as in I–V occur with one new feature:
Consecutive fifths are permitted if the last one is diminished.

Ill. 90
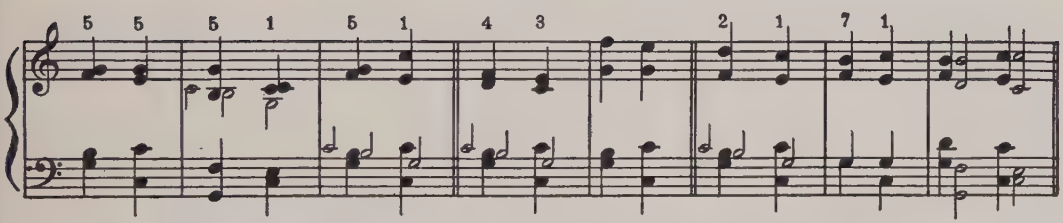


157. The movement of voices in V_7–I has been shown (Lesson 48). Reviewed—

3rd of V_7 ascends
5th } descend } one degree.
7th

Root moves to root of I or,
in Alto, Tenor and Soprano,
may be retained as 5th of I.

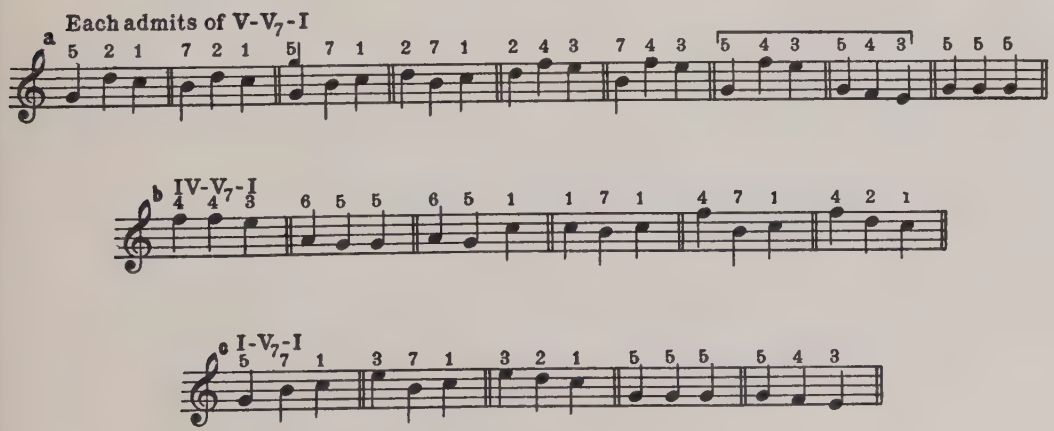
Ill. 91



Observe: In Measures 2, 3, 4 and 6 the 3rd of V_7 (leading-tone) is permitted two leadings. *In the Alto or Tenor, if preceded by a higher tone, it may descend a third to the 5th of I.*

158. The following melodic patterns admit of the chord successions indicated. They are equally practical in both major and minor.

Ill. 92



Exercise 76. Arrange in rhythmic succession of notes and harmonize according to the patterns shown above.

(1) B♭ +3 4 4 3 2 1:

(2) b 1 6 5 1 2 4 3:

(3) A♭ +3 4 2 1 6 5 4 3:

(4) d −1 $\overset{6}{5}$ 5 6 1 7 1:

(5) f♯ +5 4 7 1 2 3:

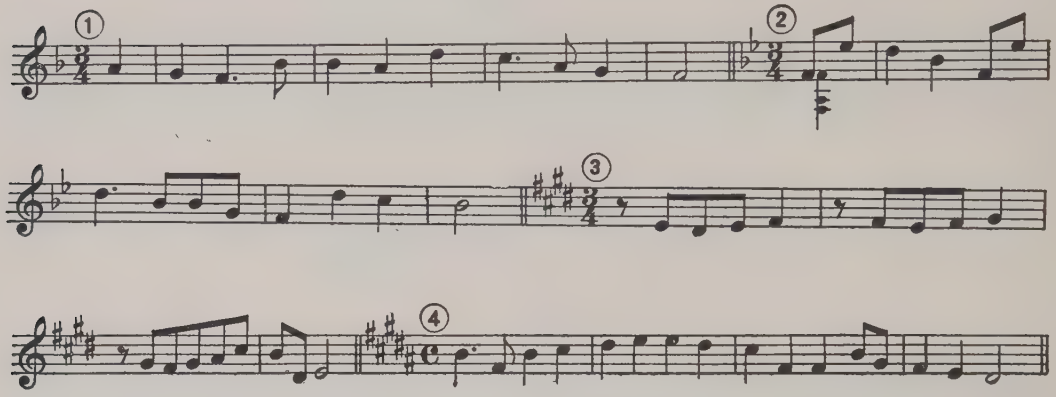
(6) g −5 5 $\overset{4\,3}{7}$ $\overset{1}{5}$ 5 5:

(7) D $\overset{2}{5}$ 5 1 7 2 1

(8) G 1 1 7 4 3 2 1

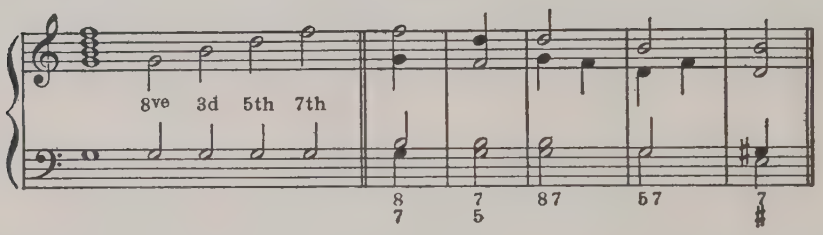
(9) a♭ −5 7 1 1 2 $\overset{1}{\underset{7}{}}$

Exercise 77. Harmonize using I, IV, V and V_7. Work each exercise in the given key and its tonic minor.



Given Bass:

Ill. 93



159. Figures below the bass indicate the chord to be written. They are to be calculated from the bass-note. Figures above the bass indicate the interval of the chord to be placed in the soprano.

7 by itself or in combination with 8, 5 or 3, means a 7th chord, root in bass. If a doubled root is wanted, $\frac{8}{7}$ is used. If the 5th is not to be omitted $\frac{7}{5}$ is used. Otherwise, the choice is either obvious or left to the pupil.
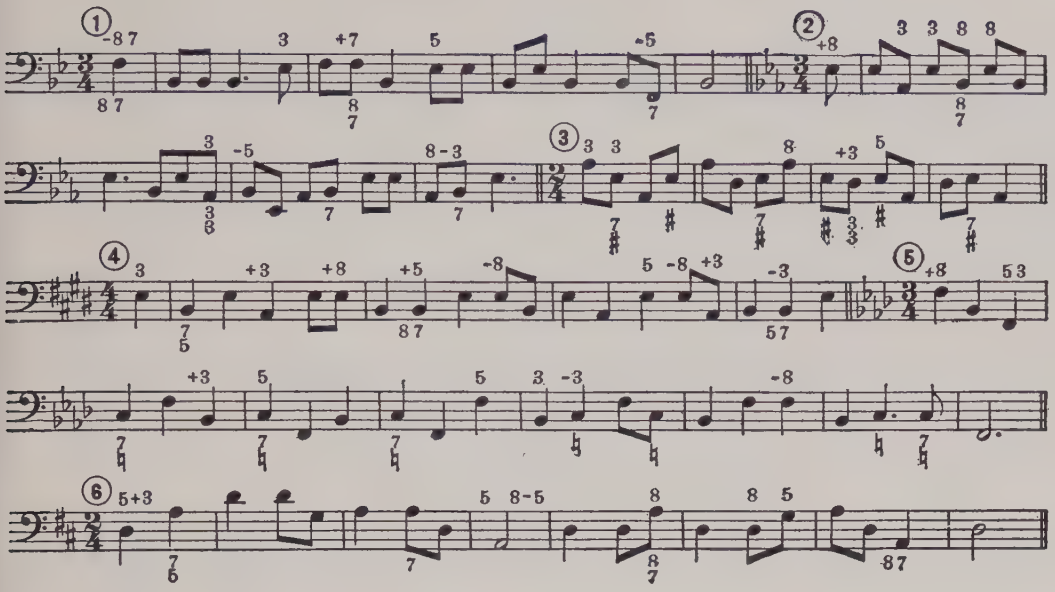
$\frac{7}{\sharp}$ means 7th chord with 3rd above the bass sharped.

8 7 means a triad followed by 7th chord, the root of triad moving to the 7th of the 7th chord.

5 7 means a triad followed by seventh chord, the 5th of the triad moving to the 7th of the 7th chord.

$\frac{3}{3}$ Any figure duplicated this way demands the doubling of that interval above the bass.

Exercise 78.



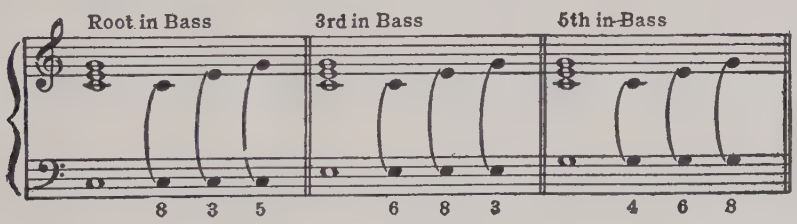
LESSON 51

Chord Inversions—Analysis

The quality of sound produced by a chord, changes with every shape and position. The interval used as bass, the one in the soprano, the distance between tones as distributed, the tone doubled or omitted—these are important factors in producing the quality.

160. A chord of three tones is called a *Triad* only when its root is the bass. With the 3rd or 5th as bass, the triad is *Inverted.*

By *Inversion* is meant that the relation of the root to the other intervals has been changed. As a *Triad*, the root is below the 3rd and 5th. As an *Inversion* the 3rd or 5th is below the root.



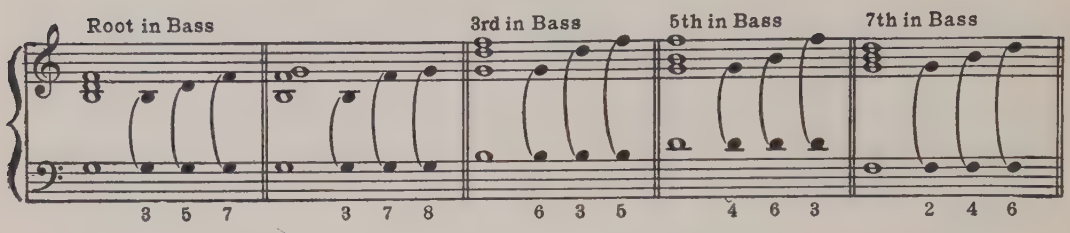
8 / 5 8 8 5 8 5 or 3 / 3 5 3 3 = *Triad* (root in bass). Indicated in analysis by I, II, etc.

8 / 6 8 6 or 6 / 3 6 3 = *First Inversion* (3rd in bass). Called 6th chord. Indicated in analysis by I_6, IV_6, etc.

8 / 6 or 6 / 4 4 = *Second Inversion* (5th in bass). Called 6-4 chord. Indicated I^6_4, etc.

161. A chord of four tones has four positions.

Ill. 94



$\begin{matrix}7&8&8&7&7&8\\5&7&7&5&3&7\\3&5&3\end{matrix}$ or 7..... = *Seventh Chord* (root in bass). Indicated V_7, etc.

$\begin{matrix}6\\5\\3\end{matrix}$ or $\begin{matrix}6\\5\end{matrix}$..... = *First Inversion* (3rd in bass). Called 6-5 chord. Indicated II^6_5, etc.

$\begin{matrix}6\\4\\3\end{matrix}$ or $\begin{matrix}4\\3\end{matrix}$..... = *Second Inversion* (5th in bass). Called 4-3 chord. Indicated VI^4_3, etc.

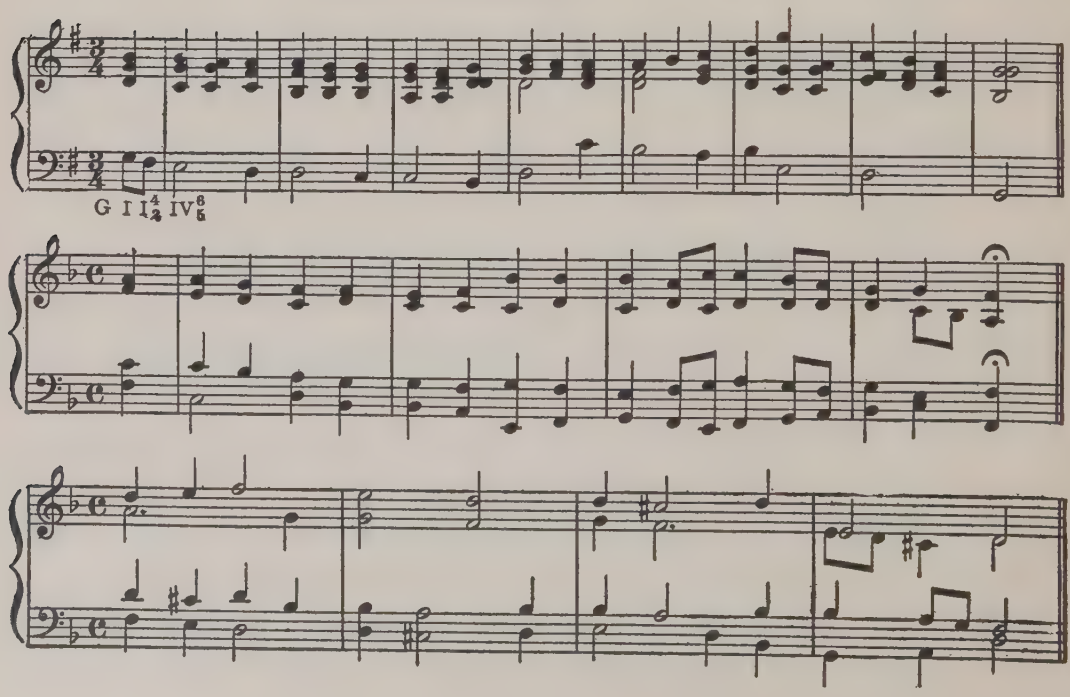
$\begin{matrix}6&&4\\4&6&4\\2&2&2\end{matrix}$ or 2..... = *Third Inversion* (7th in bass). Called 4-2 chord. Indicated I^7_2, etc.

162. Of the five-tone chords, only one will be considered in this text—the *Dominant Ninth Chord*—with the root or 7th in bass.

$\begin{matrix}9&9&\\7&7&9\\3.&5.&7\end{matrix}$ or 9..... = *Ninth Chord* (root in bass). Indicated V_9.

$\begin{matrix}4\\3.\\2\end{matrix}$..... = *Third Inversion* (7th in bass). Indicated V^3_2.

Exercise 79. Under each chord, place the proper Roman numeral and position figures. (In all future analysis use the same system of marking.)



FOUR-PART TRANSCRIPTION

163. At this point of advancement the author has found it of practical value to the pupil to begin to require the transcription into four-part harmony of many piano-pieces carefully selected and graded as to harmonic and melodic complexity. This type of work needs the patient guidance of an instructor who will frequently find it necessary, however simple the selection might be, to offer explanation of matter not yet reached in the text-book study.

Analysis and applied harmony cannot wait while several years pass in acquiring a technique in conventional harmony tasks and there is no reason why one should not be naming Suspensions, Pedal-points, Chromatic Alterations, etc., long before using them in exercises. It is entirely practicable to learn to recognize the complete harmonic material without writing a single chord succession and to learn the application of academic rules directly from the printed page.

There will be a logical correlation between an actual piece of music and a four-part harmony exercise if the pupil can be taught to see in the former an amplification of the latter. Subjoined is a plan of work used by the writer and in the next few chapters are details necessary to the carrying out of the plan.

In the following outline, each Step is to occupy as long a time as is necessary for complete understanding. The entire course will require not less than three semesters of two assignments a week, a small part of each lesson being devoted to explanation and correction. This work is to supplement the regular text-book matter and not to displace it.

164. Select a phrase or period from some standard composition:

Step 1—Write the chords in their elementary shape (Lesson 29).

Step 2—Reduce the melody to chord-tones only, eliminating all non-harmonic tones (Lesson 52).

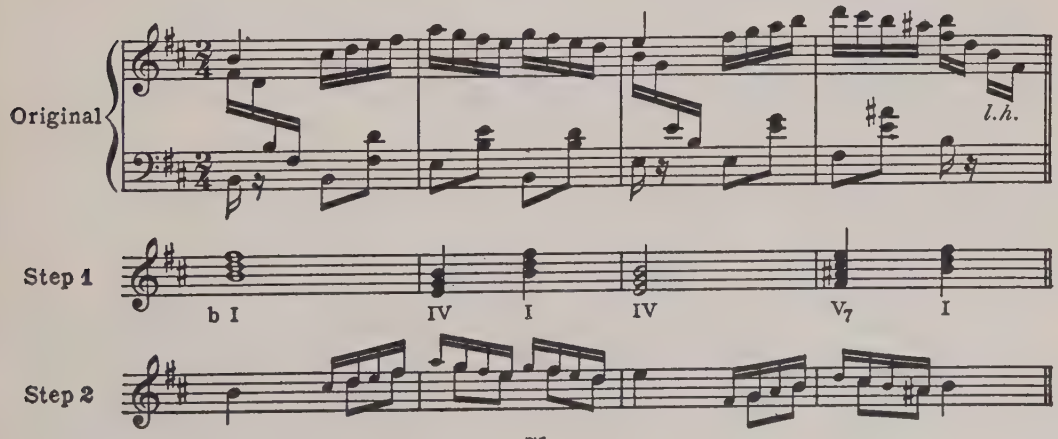
Step 3—Reduce the melody further to the simplicity of a harmony exercise, using only as many of the chord-tones as are necessary to make a progression to the melody-tone of the next chord (Lesson 53).

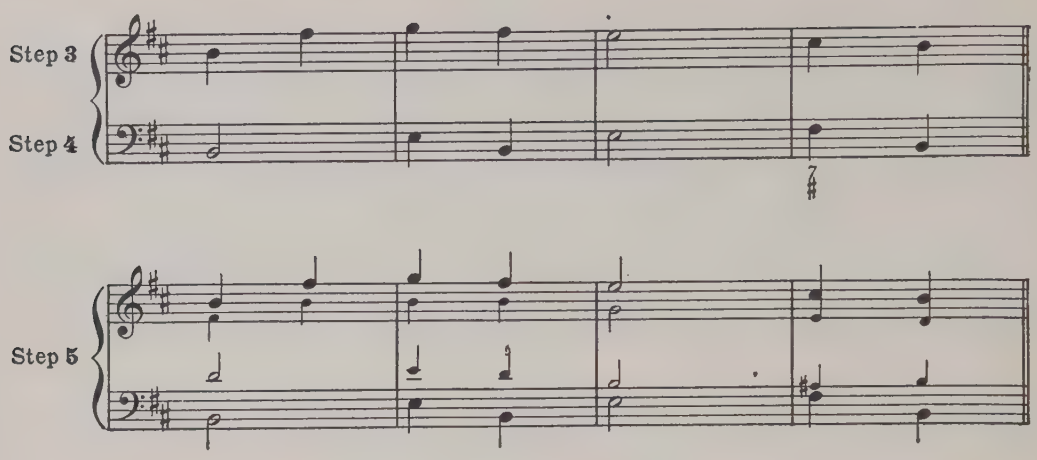
Step 4—Reduce the bass to the fewest possible tones, to resemble a "given bass." Supply the Arabic numerals $\frac{6}{5}$, $\frac{4}{3}$, etc. and, as far as advancement permits, the Roman numerals and key designations.

Step 5—Add the alto and tenor notes. While the reduced bass is dictated by the chord-position used by the composer and the soprano tones to those actually found in his melody, the inner voices are supplied by the student without reference to the printed composition. Of course they must be part of the chords used by the composer but the arrangement and leadings will be entirely according to text-book rules.

These Steps are illustrated as applied to a phrase from Schumann:

Ill. 95



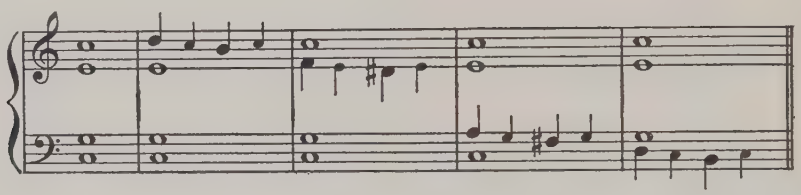


LESSON 52

Non-Harmonic (Unessential) Tones

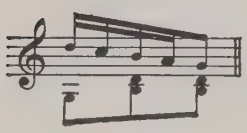
165. Each interval of a chord has several substitutes. They are the tones notated on the next staff degree a half or whole step above and below the chord-tone. They prove themselves to be substitutes of a particular chord-tone by moving into that tone.

Ill. 96



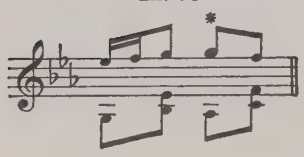
166. These substitutes are named according to the way in which they are approached and quitted.

Ill. 97



The chord is G B D.
The melody-notes C and A do not belong to the chord.
They pass diatonically from one chord-note to another.
They are called *Passing-Tones.*

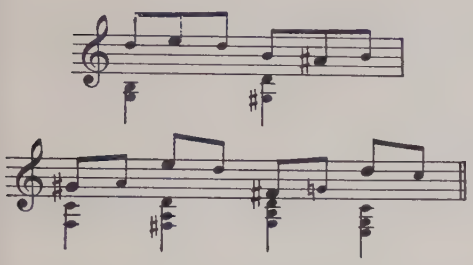
Ill. 98



The first chord is E–G–B.
The second is F–A–C.
G at * does not belong to its chord.
It is repeated from the previous chord of which it is a part.
It is "hung" or "suspended" from the first chord into the second and is called a *Suspension.*

167. In the following the larger notes are obviously substitutes because they move step-wise into chord-notes. They do not answer to the description of passing-tones and suspensions. They are called *Neighbors, Upper* or *Lower.*

Ill. 99

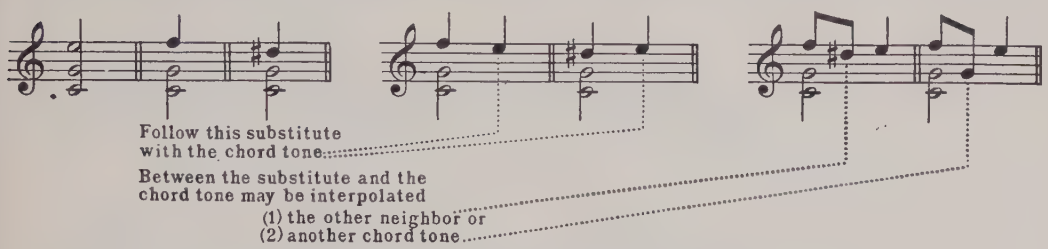


Each neighbor returns to the tone that preceded it (*Embellishments*), or

it enters by a leap progressing to the displaced chord interval (*Appoggiaturas*).

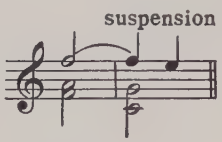
168. The following practically applies the preceding principles:

For any chord-tone substitute the tone a degree above or below. (If above, it is usually the next scale-tone. If below, it is usually a half-step below.)

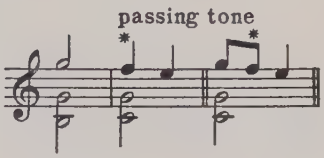


169. Preceding the substitute tone may be

(a) the same tone sounding with the previous chord;
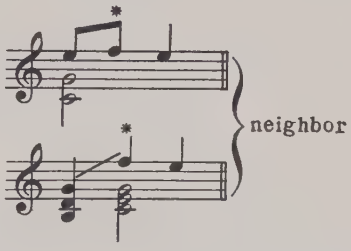


(b) the tone that causes the substitute to be called a passing-tone;



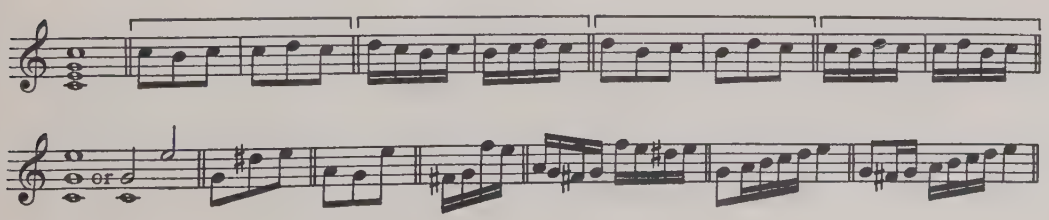
(c) the same tone as the one that follows the substitute;

(d) in the case of a leap, a tone of the same or previous chord.



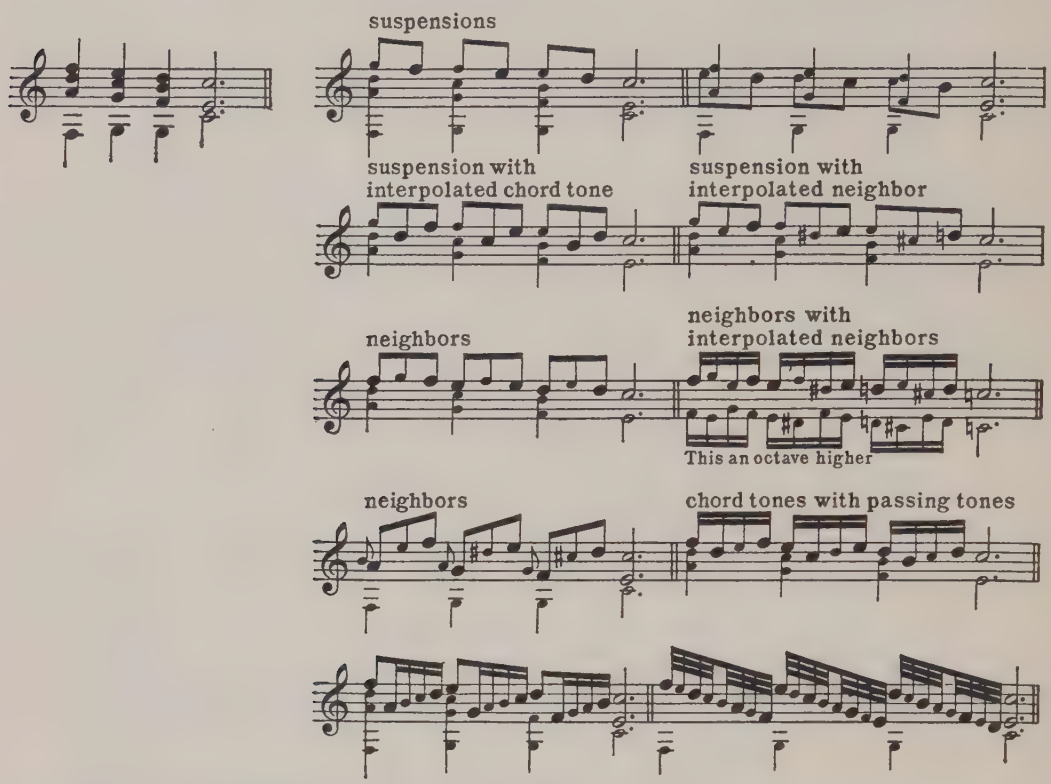
The following shows some uses of the substitute tones in embellishment of a single tone or an interval.

Ill. 100



170. The use of neighboring tones makes an interesting form of variation. Analyse the following, noting which feature of this lesson is illustrated in each instance. The chord-tone subject to the embellishment is larger than the others.
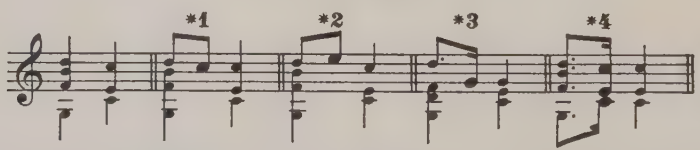
Ill. 101



171. A substitute delays or embellishes a chord-tone.

An *Anticipation* hurries the entrance of a chord-tone. It results from bringing in one or more of the chord intervals before the rest of the chord enters; it sounds a tone of one chord with the *previous* chord.

Ill. 102
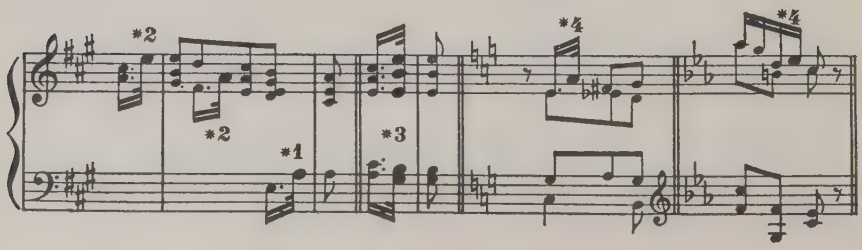


*1—An anticipation is Regular if the tone anticipated is reiterated as its chord enters.

*2—It is Irregular if it skips to a new chord-tone.

*3—It is an Harmonic Ant. if it is a legitimate part of the chord with which it sounds as well as of the chord it anticipates.

*4—It is an Anticipation Chord if the entire chord is brought in before the expected beat.

Ill. 103



*1. Reg. Ant.
*2. Har. Ant.
*3. Ant. Chord
*4. Irreg. Ant.

172. *A Pedal Point* (Organ Pt.) is a tone sustained or repeated in one part while the other parts move without harmonic regard for it. It will belong to *some* of the chords but not to all.

It usually is in the lowest part but may be in any other or several parts at one time, and may be transferred from one part to another. It is named according to the scale degree involved—Tonic Pedal, Dom. Ped., etc.

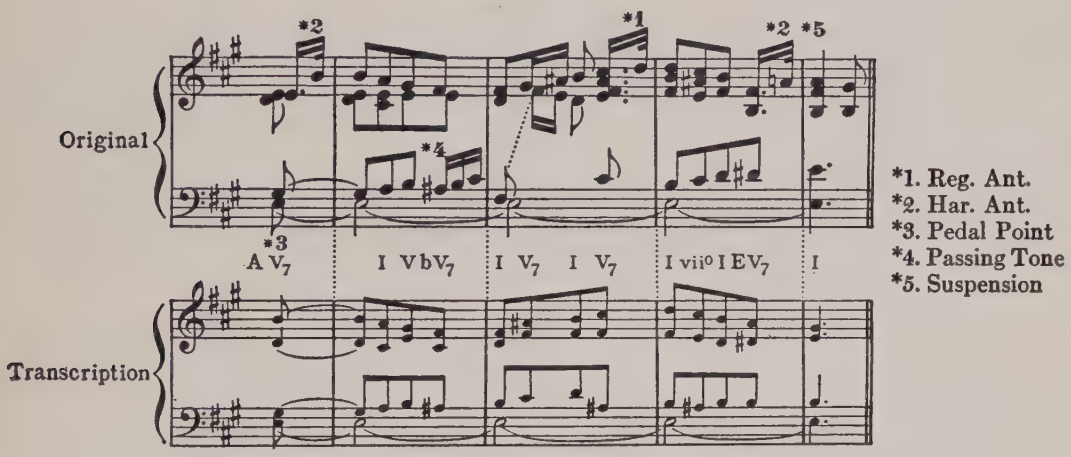
It is an Inverted Ped. if in any but the lowest part. If Tonic and Dom. are used simultaneously it is called a Pastoral Pedal.

If lasting for but three chords it is a Short Pedal.

See Lesson 115 for illustrations.

173. In the transcription to four-parts, a bass pedal-point should be retained as lowest part. An inverted pedal and the dom. tone of a pastoral pedal should be eliminated.

Ill. 104



Exercise 80. (Optional.) Write a number of variations on some simple melody such as "America," each variation using some *one* of the figures shown in Ill. 101.

Proceed with the work outlined in Par. 164, Step 2, supplementing succeeding lessons.

LESSON 53

174. To reduce the Soprano-part of a more or less elaborate composition to the simplicity of a harmony exercise:

(a) Determine the chords involved.

(b) Eliminate all melody-tones not belonging to the chords (suspensions, passing-tones, neighbors).

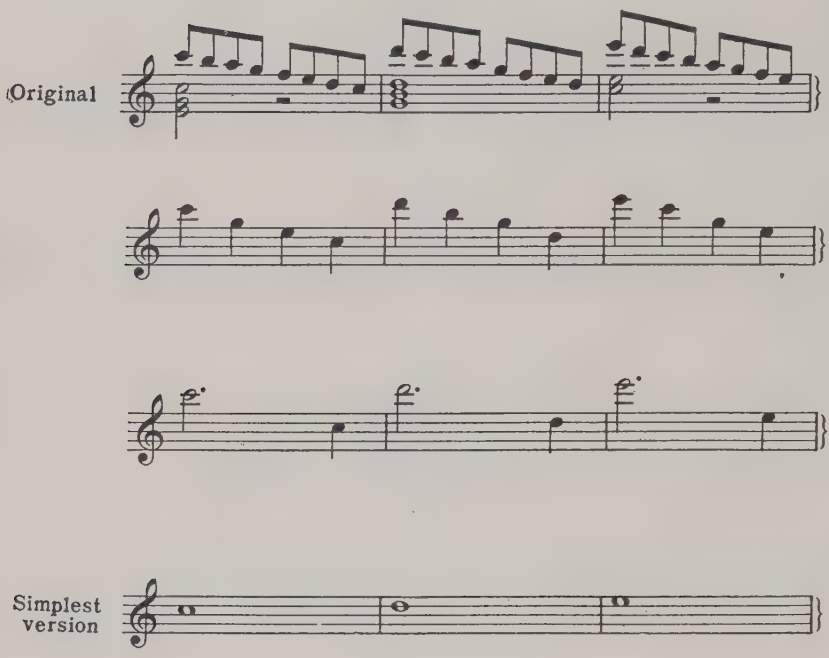
(c) Eliminate all the chord-tones except the *first important one* and any other (or others) needed to move properly to the tone of the next *new* chord.

An accented tone is usually more important than an unaccented one.

A long tone usually has an importance greater than a shorter one.

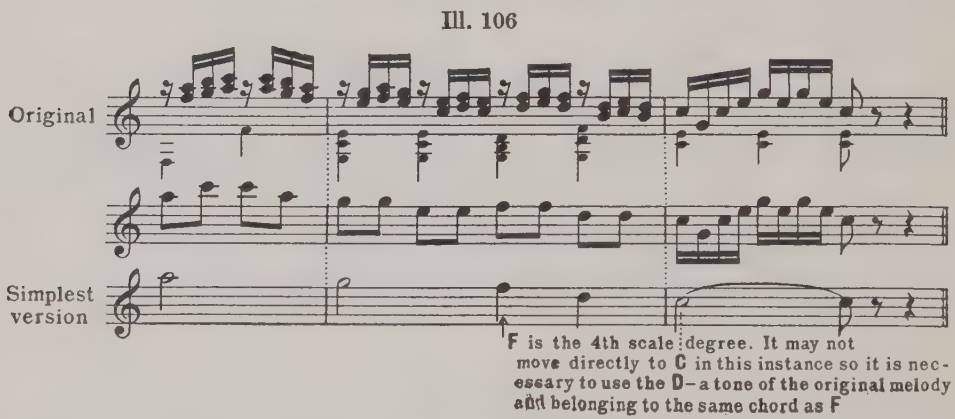
(d) Place the remaining tones in a proper Soprano register, showing strict regard for the rules of melody progression.

Ill. 105

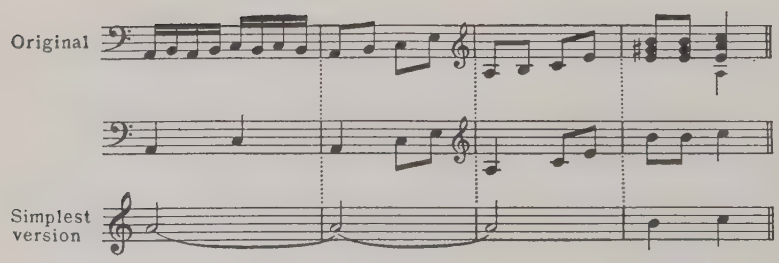


Other examples follow; analyze them carefully.

Ill. 106
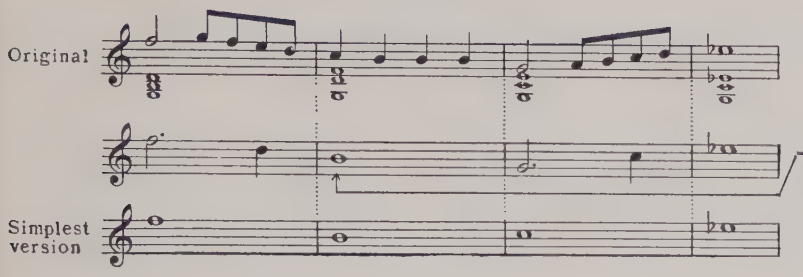


Ill. 107
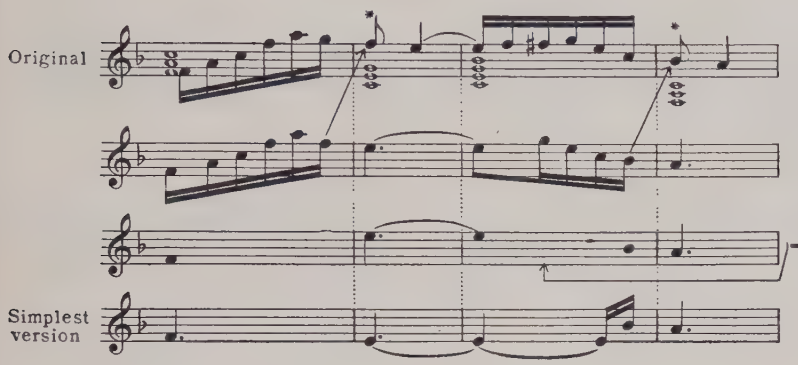


The note A begins each of the first three measures. As a soprano-note it moves smoothly to the B in the new chord, so no intermediate notes are needed.

Ill. 108



This leading-tone demands an upward progression to C. So the G may be omitted.
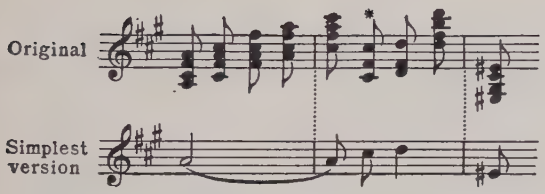
Ill. 109



The notes marked * are accented neighbors. Each belongs to the previous chord and, in this and similar instances, should be used as an essential note of that chord.

This version results in a bad skip (Aug. 4th).

Ill. 110



The abrupt change of register at * makes the C♯ an essential note.

Exercise 81. Follow directions of Step 3, Par. 164.

LESSON 54

175. To identify the harmonic bass in a musical composition; to reduce the lowest part to the simplicity of a given bass in a harmony exercise.
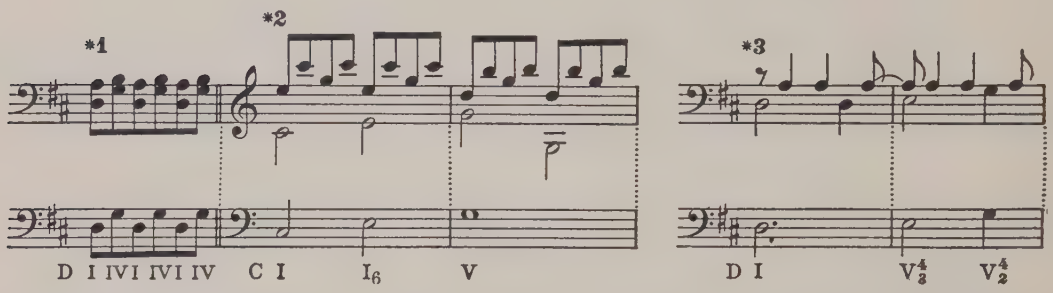
This presents greater problems than the simplifying of a melody as the harmonic basis must be exactly as the composer conceived it.

After determining the chord, the *lowest* chord-tone is usually considered the *Bass.* But frequently this lowest tone is overshadowed by more prominent ones. Features that give importance to such tones are:

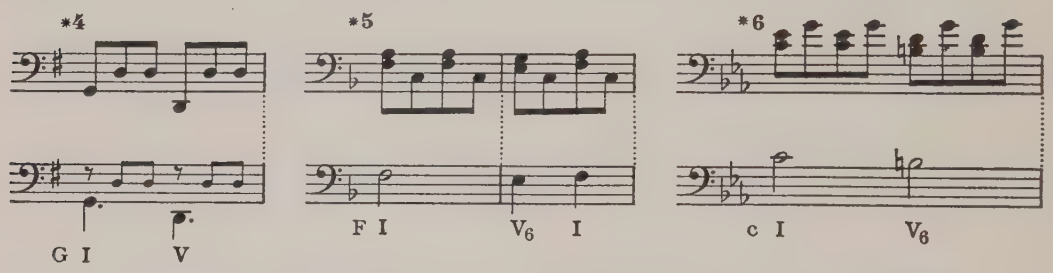
Repetition or recurrence in a passage.
Occurrence on an accent.
Relatively longer value.
Resolution of a dissonance.
Chromatic alterations causing modulation.
Abrupt change in register.

The problem, then, is to determine *which* of the lowest tones is to be considered the harmonic bass. Analyse the following:

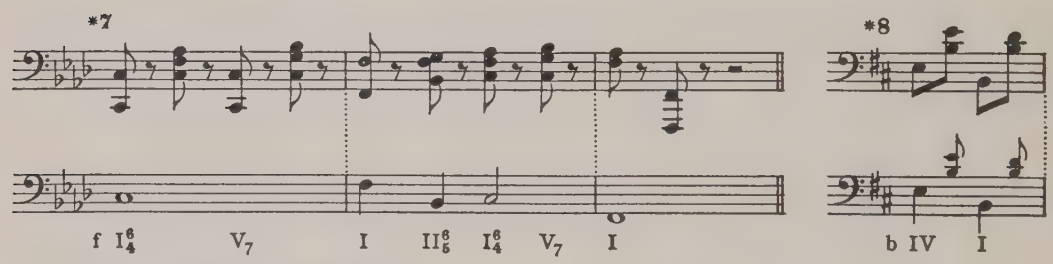
Ill. 111



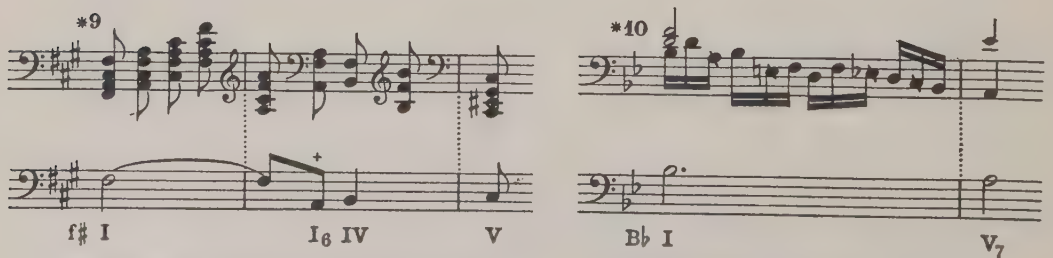
These basses are obvious. In *2 the notes have been placed in a comfortable bass register and the octave leap changed to a single whole note.



*4 The *lowest* and *first* note of each group is the bass.
*5 The notes on the accented parts of the meas. are selected.
*6 Bass is derived from the *lowest, accented* and *recurring* notes.

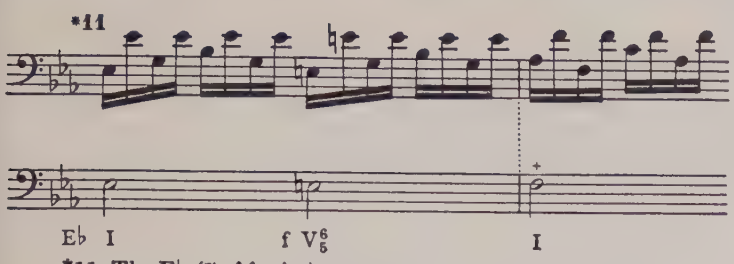


Previous comments cover these.
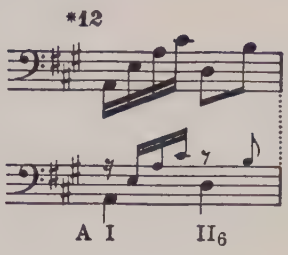


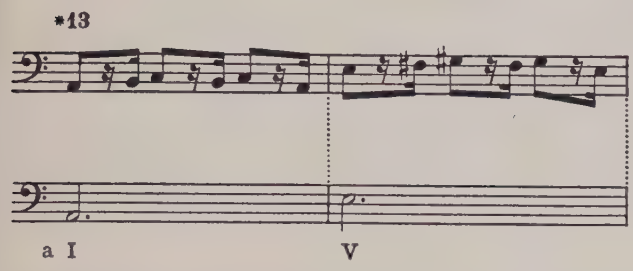
*9 The f♯ is the first and lowest note of the first five beats. The abrupt change to the lower register at + makes the A important.

*10 After eliminating the neighbors the bass becomes obvious.
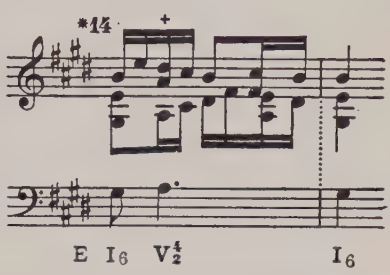


*11 The E♮ (7 of f min.) must move to F, so at + the lowest note takes preference over the accented.
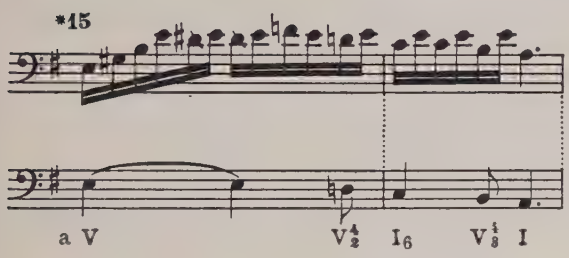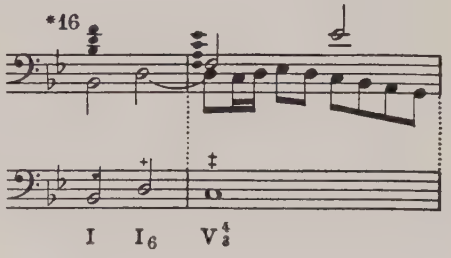




*13 The notes selected as bass are the first, last and lowest in each chord.



*14 The presence of the leading-tone at + identifies the V_7. A, selected as the bass, is the first, last and lowest of the chord-tones.
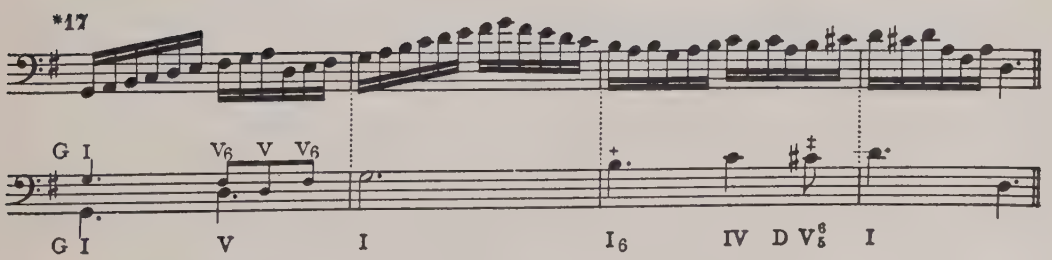


*15 The cancelled notes are neighbors.



*16 The D at + must be used because it is tied into the suspension.

C at ‡ must be used because it *resolves* the suspension.



*17 In Meas. 1, either version is acceptable.
At + the B is first in its group and recurs three times.
At ‡ C♯ is a note of the modulating chord DV$_5^6$ and is important.

Exercise 82. Follow directions of Step 4, Par. 164.
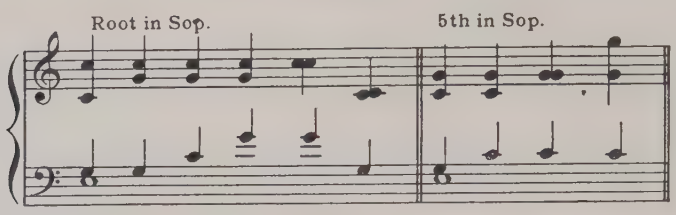
LESSON 55

First Inversion of I, IV and V

176. I, IV and V may now be used in the first inversion.

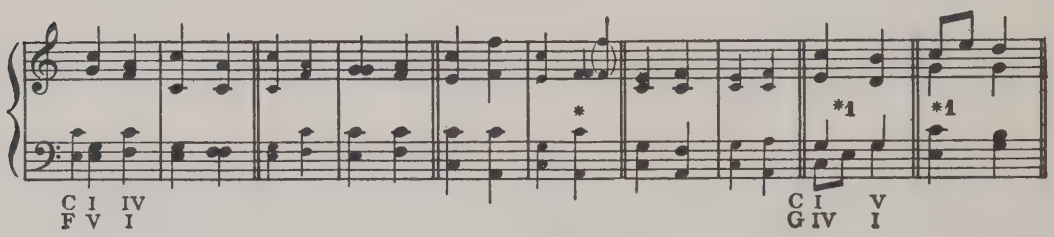
The root or 5th may be doubled.
The 3rd is seldom doubled.
No interval may be omitted.

Ill. 112



To double the 3rd of these chords is to unduly emphasize unimportant scale degrees. Steps 1, 4 and 5 are best doubled. Exceptions to the rule forbidding the double 3rd will be noted from time to time.

Ill. 113
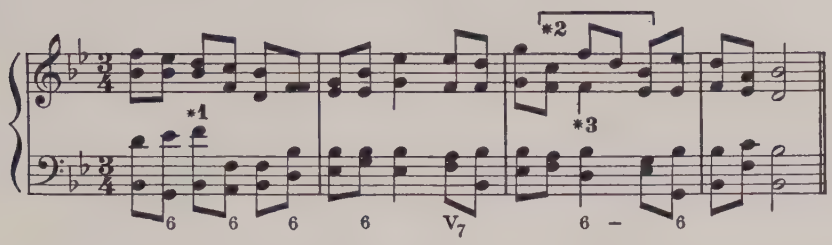


Each succession is acceptable in minor.
The two chords in each group may be reversed—the last one sounded first.
The groups in small notes are less usual than the others.
The doubled 3rd at *1 is exceptionally justified in the last two measures by the short value of the moving tones.

177. In deciding between a triad and a 6th chord in melody harmonization, the following may influence the choice:

(a) Select the chords according to former rules and patterns.
(b) The final I should not be inverted. It is exceptional to invert the first chord, although an "up beat" may be V_6.
(c) If the 3rd is in the soprano, the root should go in the bass.
(d) The best sounding position of a 6th chord is that with its root in the sop. If the root is in the melody, the 3rd may be the bass-tone.
(e) The 5th in the sop. permits a triad or 6th chord.
(f) In chord repetition it is advisable to change the bass-tone if possible. This need not apply to short-valued repetitions.
(g) The alto and tenor should move with reasonable smoothness, avoiding large skips.
(h) Par. 119 forbidding a succession of triads both with their 5ths in the sop. does not apply if either (especially the last) or both are inverted.

Examine the voice-leading and doubling in the following:

Ill. 114



*1 An octave-leap is equivalent to tone repetition and justified here by the need of leaving the high register.
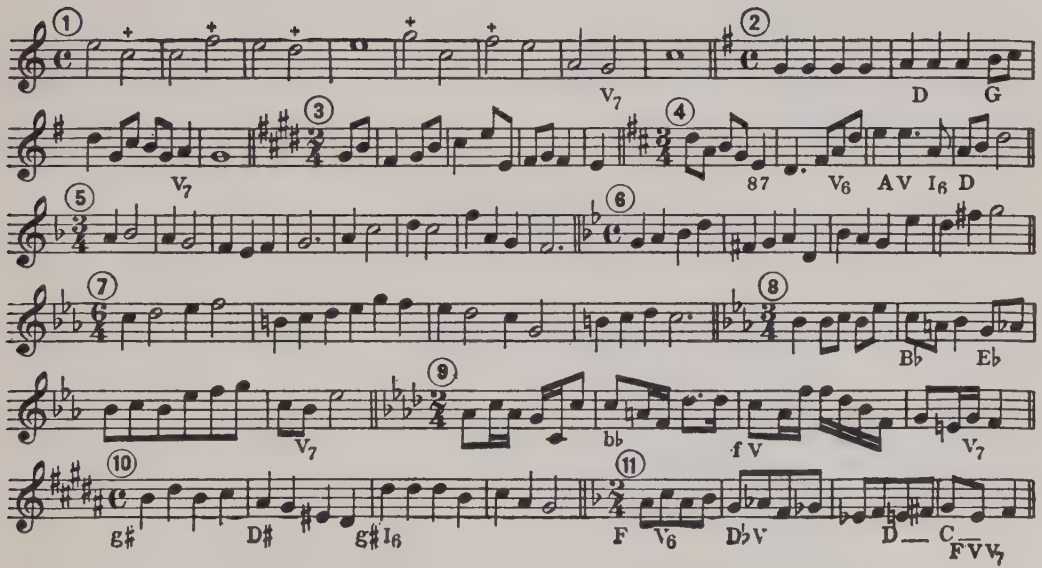
*2 See Par. 177 (h).

*3 See Ill. 113 *1.

Exercise 83. Harmonize, using I, IV and V as triads and 6th chords. V_7 is to be used only as called for.

For this exercise use the progression IV–V and V–IV only in triad form—according to former patterns—and do not use successive 6th chords except in chord repetition.

The indicated modulations are to be effected as explained in Lesson 43 or 44.
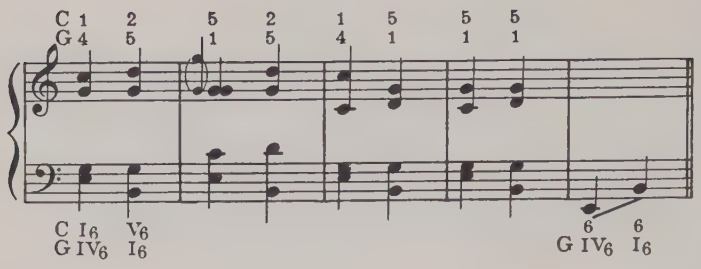


LESSON 56

First Inversion I, IV, V (Continued)

178. I_6–IV_6: IV_6–I_6: I_6–V_6:

Major or Minor Key.

Ill. 115



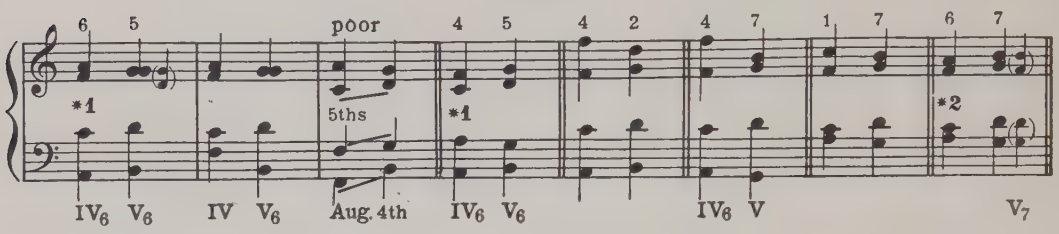
Observe the voice-leading, the repetition of the common tone, the diatonic movement in one part, the skip of a 4th or 5th in another part.

The two chords in each measure may be taken in reverse order or the bass-skip taken in the direction opposite to that shown, except in V_6–I_6.

If V_6 moves to I, the latter must be in triad form. Why?

179. IV–V (either or both as 6th *chords*).
Only meas. 2, 6 and 7 are possible in the minor. Why?

Ill. 116



Analyse each voice movement.

*1 The doubled 3rd in IV is good here.
*2 This is the first available harmonization of 6 7. It is necessary to double the 3rd in IV.

180. Par. 115, calling for contrary motion, does not apply if either or both chords are inverted.

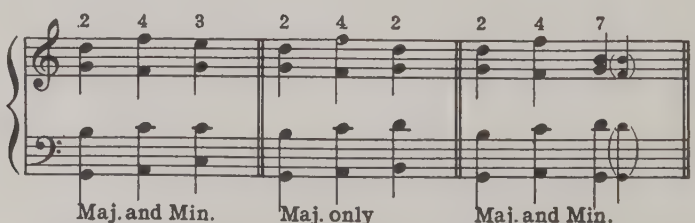
IV_6–V_6 is not possible in the minor key. Why?

Melody patterns:

6 . 5	4 . 2 4 . 5	1 . 7 4 . 7	6 . 7
IV–V_6 IV_6–V_6	IV_6–V_6	IV_6–V	IV_6–V

181. The progression V–IV becomes acceptable in a variety of ways if either or both chords are inverted.

Ill. 117

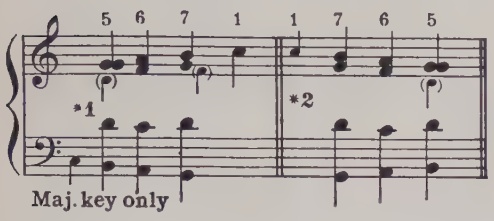


2 4 3	2 4 2	2 4 7
V–IV_6–I	V–IV_6–V_6	V–IV_6–V

Compare with Ill. 62 and 63.

182. In IV–V or V–IV progressions, if either or both chords are inverted, one voice sings successively the roots while another sings the 5ths of the chords. It is important that *the voice singing the roots be higher than the one singing the 5ths.* Otherwise consecutive fifths result. (See Ill. 116, Meas. 3.)
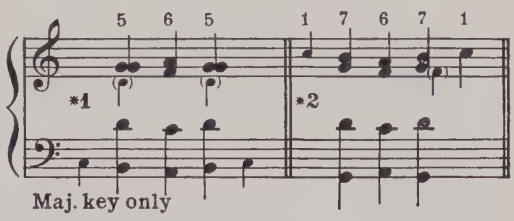
Ill. 118



5 6 7 1 | 1 7 6 5
V_6–IV_6–V–I | V–IV_6–V_6

Note that the Sop. sings the same tones as the Bass in reverse order; also that the Bass of *1 is the Sop. of *2 and vice versa.

Ill. 119



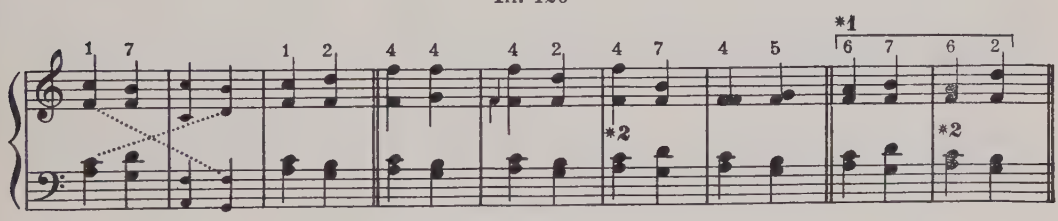
5 6 5 | 1 7 6 7 1
V_6–IV_6–V_6 | V–IV_6–V

A better harmonization of this melody pattern will be shown later.

Note that the Bass of *1 is the Sop. of *2 and vice versa.

IV_6–V_7:

Ill. 120



The measures bracketed under *1 are not possible in the minor. Why?
All measures except *2 admit of the alto and tenor exchanging parts. (Meas. 1.)

Exercise 84. Arrange rhythmically in musical notation and harmonize, using chord-groups shown in this lesson:

(1) G♭ 1 2 (4 3) 6 7 1:

(2) E 3 2 (4) 3 (6) 5 (1) :

(3) D 5 5 6 7 1 2 (4) 3:

(4) A 1 7 6 5 6 5 (3) :

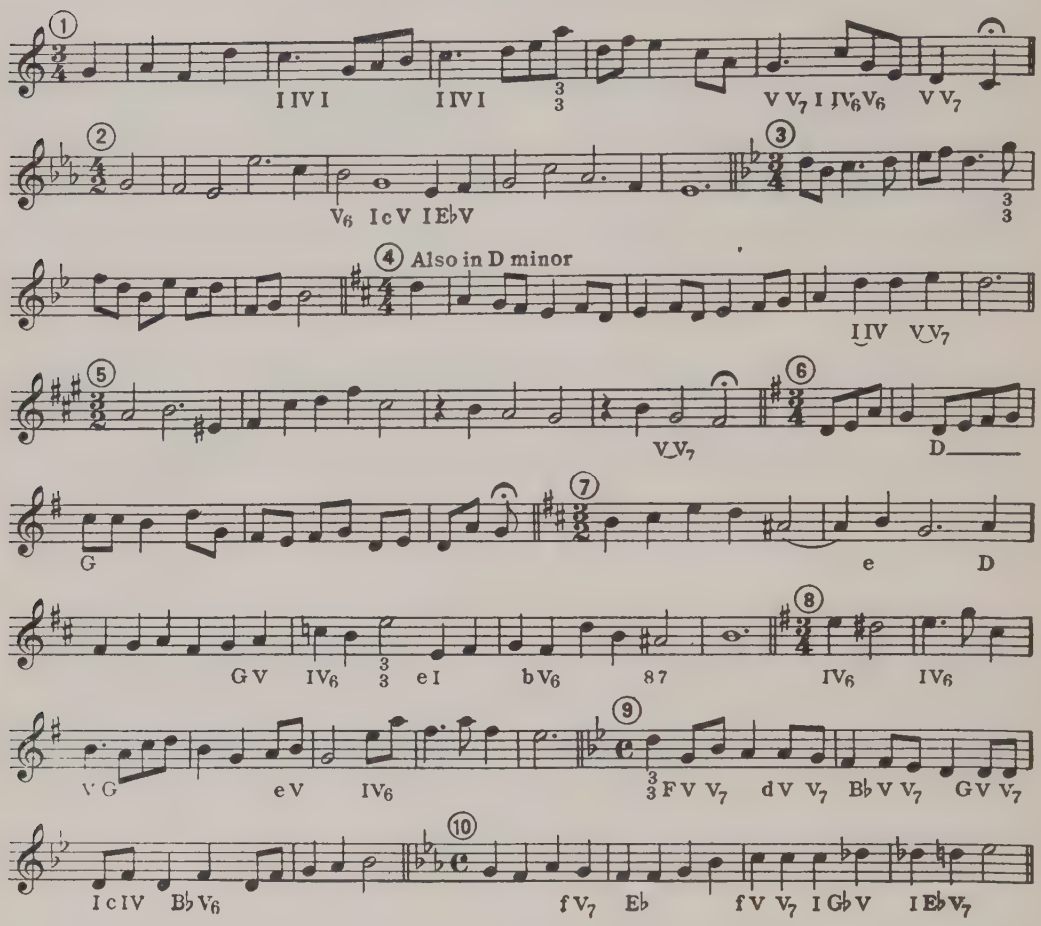
(5) f min. 3 4 (7 1 2) 4 3:

(6) b♭ min. +3 4 4 3 4 (7) 1:

(7) g min. 1 1 7 1 1 2 1:

(8) f♯ min. 3 4 (2 1) 6 (4) 5 (1) :

Exercise 85. Harmonize, selecting from the chord-groups of this lesson where possible. The modulations are to be made after the plan of Lessons 43 and 44.



LESSON 57

Sixth Chords with Given Bass
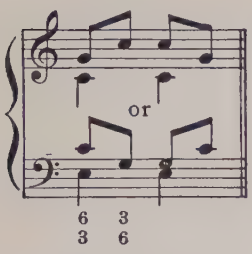
183. Any irregularity in the figuration indicates some unusual arrangement or doubling of the chord-tones, or desired part movements. For instance:

$\frac{6}{6}$ indicates a 6th chord, the 6th above the bass to occur twice (doubling the root).

$\frac{6}{3}{}_{3}$ indicates a 6th chord: the 3rd above the bass to occur twice (doubling the 5th of the chord).
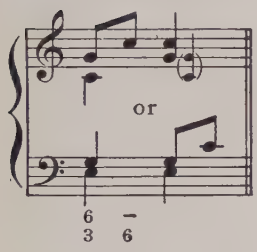
$\frac{8}{6}$ indicates a 6th chord, the octave (8) above the bass must appear, thus doubling the 3rd of the chord.

Ill. 121



6 3
3 6 Two arrangements of the same chord; the 6th above the bass moves to the 3rd above—the 3rd above moves to the 6th.
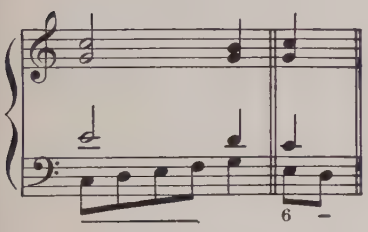
Ill. 122



6 –
3 6 Two arrangements of the same chord; the dash continues the 6, requiring that interval above the bass to remain in the same voice while another voice moves 3 to 6.

Other irregularities can be reasoned out in like manner.

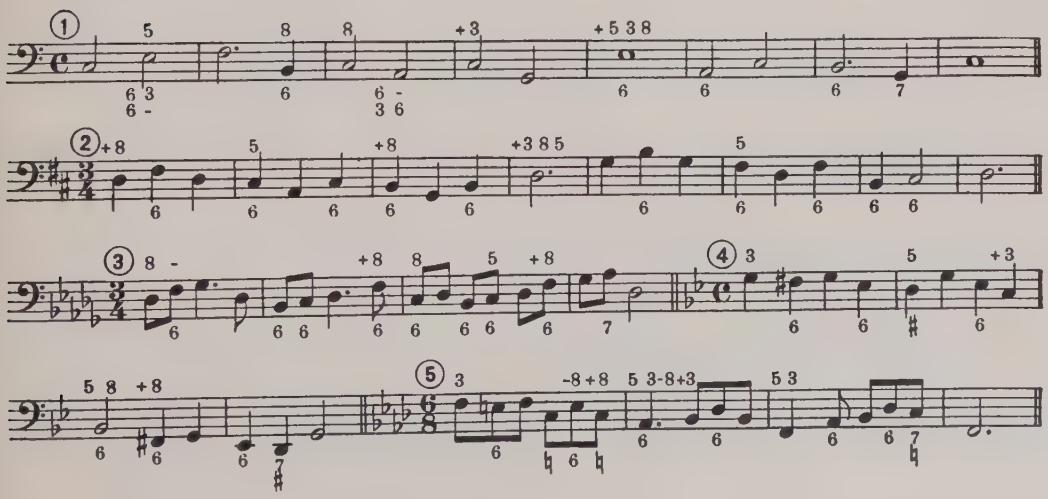
Ill. 123

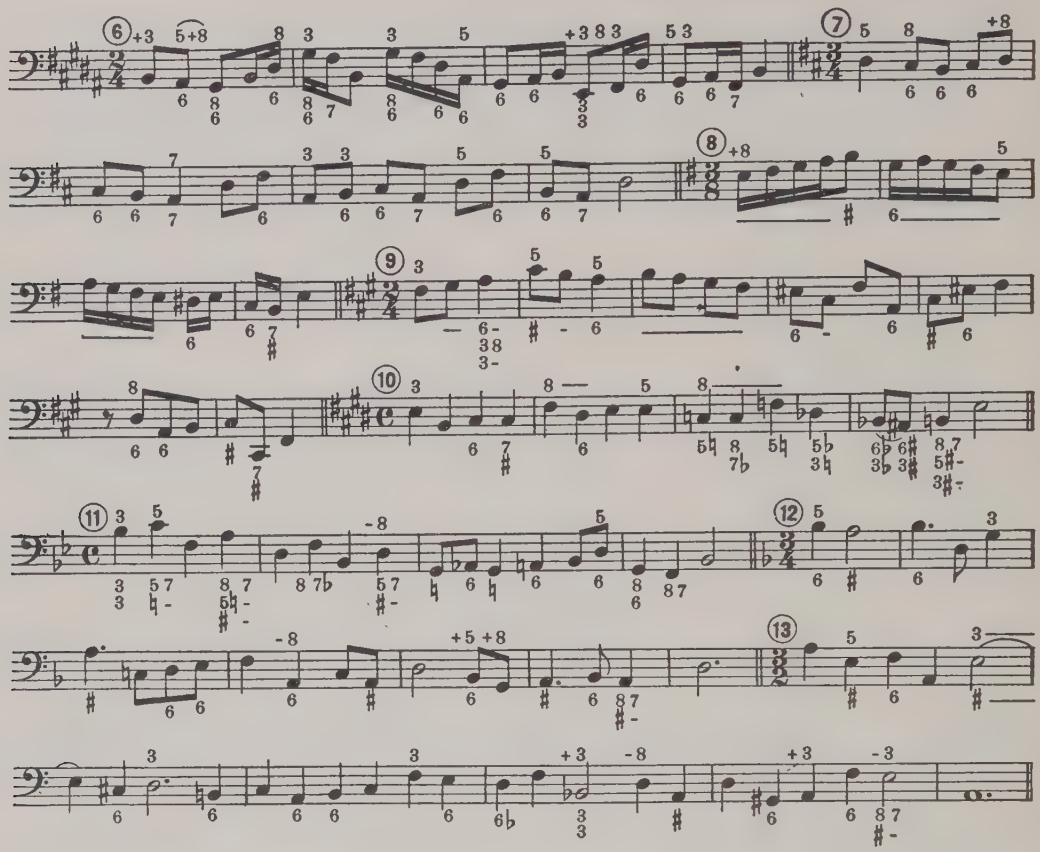


The dash (with no influencing figure as in Ill. 123) requires that the entire chord over the preceding bass note is to continue unchanged during the length of the dash. The notes not belonging to the chord are passing-tones or neighbors. (See Lesson 52.)

The figures 8, 5 and 3 *above the bass* mean the same as before; the root (8), fifth (5) or third (3) *of the chord* is to be placed in the soprano.

Exercise 86. The last four exercises contain modulations. The accidental following a figure (5♯) calls for the accidental to be placed before the note that interval *above the bass* indicated by the figure.



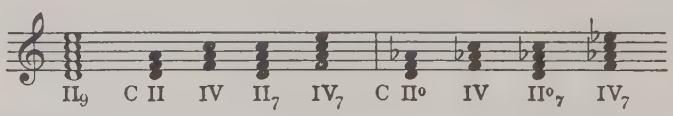


LESSON 58

II_7 AND IV_7 (ANALYSIS)

184. The Super-tonic (Second-dom.) harmony is a ninth chord built on the second scale degree. While seldom found in complete form its component parts, II, IV, II_7, IV_7, are of frequent occurrence.

Ill. 124

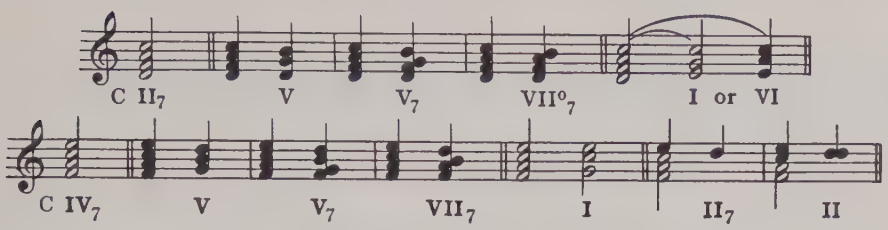


II_7 of Min. = Dim. triad, Min. 7th.
II_7 of Maj. } = Min. triad, Min. 7th.
IV_7 of Min. }
IV_7 of Maj. = Maj. triad, Maj. 7th.

185. The 7ths of V_7 and VII°_7, besides being dissonant chord-tones, are active scale degrees, having therefore a double reason for resolution. The 7ths of II_7 and IV_7 are *inactive* scale degrees and their sole basis for demanding resolution is in being dissonant chord tones. Because of this they are often given a *Passive Resolution*—the 7th is held or repeated into I or VI.
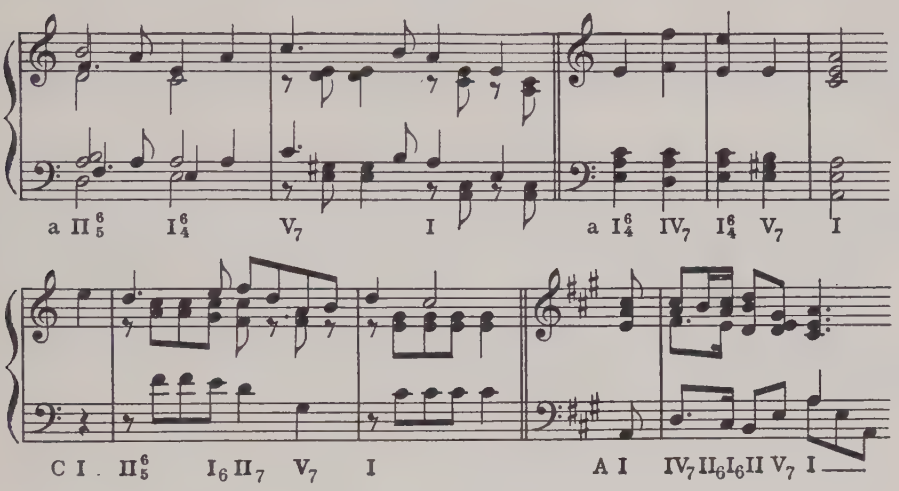
II_7 moves to chords of V_9 or to I or VI.
IV_7 moves to chords of V_9, to I (not VI) or to II_7 or II.

Ill. 125

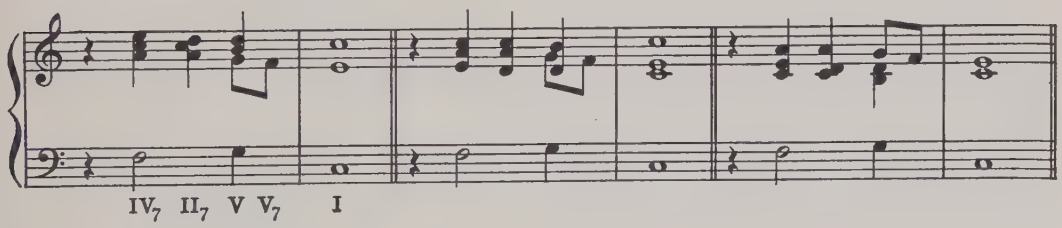


A few practical illustrations follow.

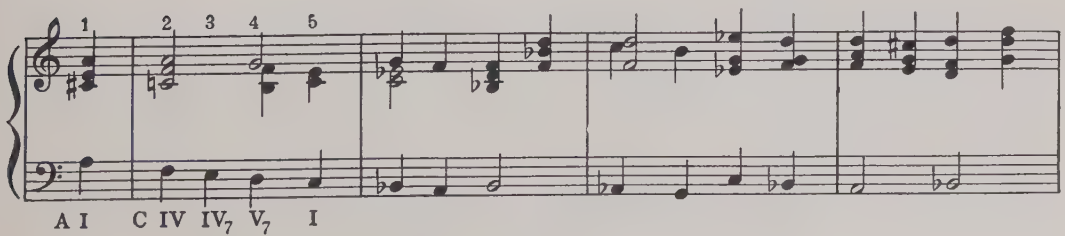
Ill. 126

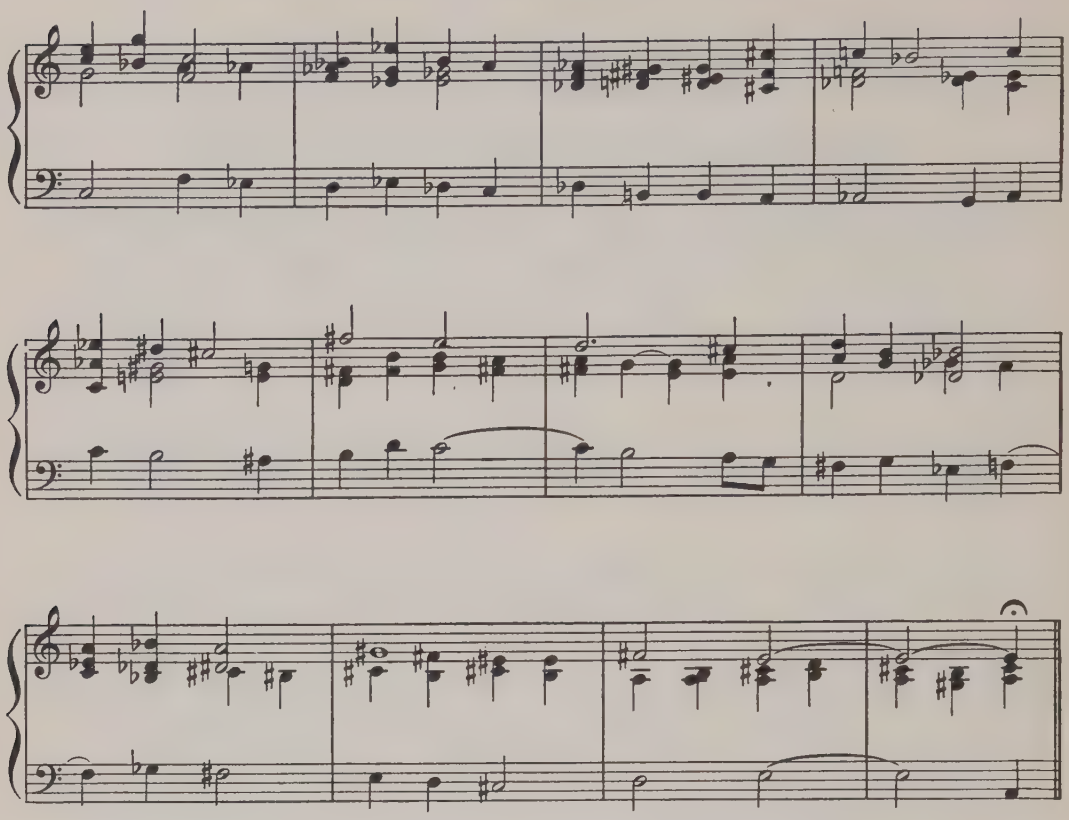


Exercise 87. Write and play in every major and minor key.



Exercise 88. Analyse—Reason as follows:
Chord 1 = A I. Chord 2 and 3 are not in A. Chord 4 is C V_7. Work back to chords 2 and 3; as they could be C IV and IV_7, mark as such.



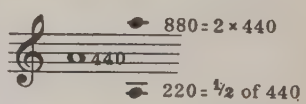


LESSON 59

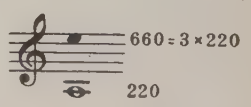
The Overtone Series

186. Tone is caused by the vibration of any tone-producing body, the vibrations being carried to the ear by sound-waves. The pitch of a tone—its quality of being higher or lower than other tones—is the result of the speed of the vibrations. The faster the vibrations the higher the tone, and vice versa. Our musical system is based on the vibration ratio of one tone to another.

A tone and its octave vibrate in the ratio of 2:1 or 1: 2. If second space A vibrates 440 times to a second, the A above vibrates twice as fast and the A below half as fast.



The ratio 3:1 determines the number of vibrations of a tone a twelfth (octave + fifth) higher than another.
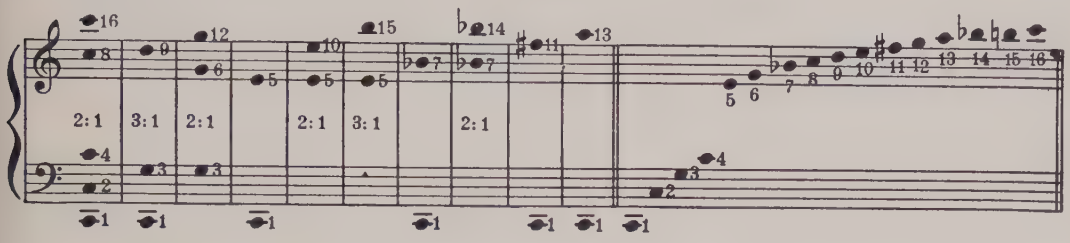


In other terms:—a string of a certain length, thickness and tension will produce A. If that string is pressed down exactly midway in its length, each half vibrates twice as fast as the entire string (ratio 2:1) and sounds an octave higher. If it is divided into three parts, each part will vibrate three times as fast as the entire string (3:1) and sound a twelfth higher.

187. The result of dividing a string into 2, 3, 4, etc., up to 16 parts is put in the form of an illustration conventionally called the "Overtone Series" or "Chord of Nature." An example of this with C representing the string vibrating its entire length is subjoined. The lowest tone is given the arbitrary numeral 1.

Each of the others receives its numeral which not only shows the order in which it occurs in the series but determines the number of vibrations as compared with any other in the series: i. e., No. 5 vibrates 5/11 as fast as No. 11. No. 9 vibrates 9/6 as fast as No. 6.

Ill. 127



Deduced from the above:

The simplest ratio, 2:1, produces no new tone—only the same in a new register.

The next simplest ratio, 3:1, does produce a new tone—the Per. 5th. It is pertinent to recall that the earliest part-writing was in consecutive 5th and their inversion, cons. 4ths. The tuning of stringed instruments is in 5ths. The circle of keys is in 5ths.

The first six of the series with Nos. 8, 10, 12 and 16 added (ten out of the sixteen) result in a major tonic triad.

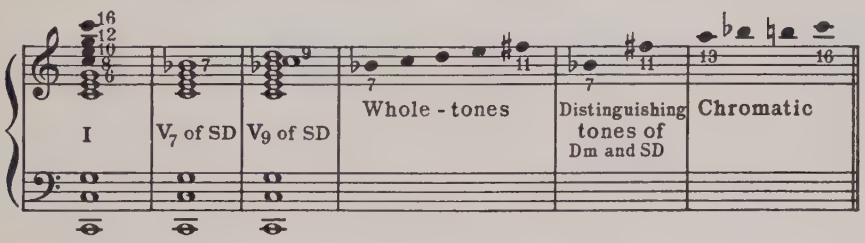
The first seven produce V_7 of the sub-dom. key.

The first nine sound a V_9 of the sub-dom. key.

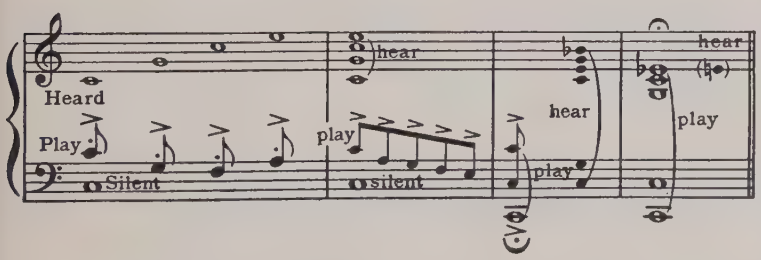
From 7 to 11 (inclusive) is a whole-tone scale. This is often cited as justification of the modern use of that scale.

Nos. 7 and 11 are the tones that distinguish the nearest related keys, F and G, from the central key C.

Ill. 128



188. The violinist practically applies the series when he plays harmonics. The quality of all tones heard is influenced by the presence of a few or many of its overtones. A refined ear is always conscious of this and to even the average listener the following experiments will carry an audible impression.



A good piano and a quiet room are necessary.

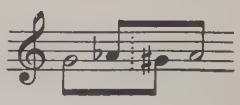
The notes to be played in the last two meas. must be held for some time; the overtones will be audible ultimately.

Exercise 89. Write the "Overtone Series" over a number of fundamentals.

LESSON 60

The Chromatic Scale

189. Between two scale degrees a whole tone apart, there is an imaginary half way point not possible of notation. A chromatic inflection raising the lower degree is above the half-way point and an inflection lowering the upper degree is below the half-way point.



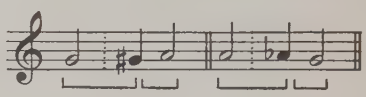
Obviously, the chromatic semitone is "larger" than the diatonic semitone.

190. In a chromatic division of a whole step the larger semitone is taken first:—the tone first heard is chromatically altered and moves in the direction started by the alteration.

A tone chromatically raised out of the scale ascends a diatonic semitone.

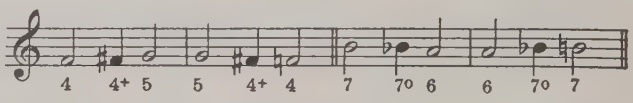
One chromatically lowered out of the scale descends a diatonic semitone.

Ill. 129

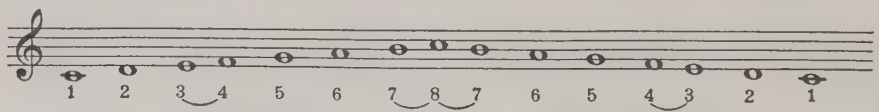


Exceptions: Step 4 is raised and step 7 lowered both in the ascending and descending progressions.

Ill. 130

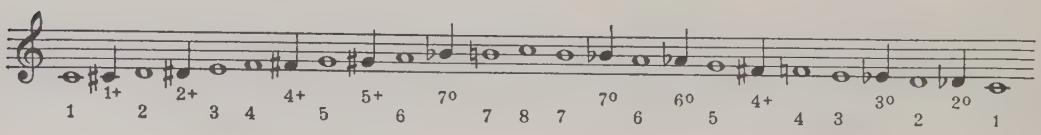


191. A chromatic scale in a major key is formed as follows. Write the diatonic major, number the degrees and mark the half-steps naturally existent.



Fill in the chromatic tones, observing the rule—"alter the tone being left, except that 4^{+} and 7° are used both ascending and descending."

Ill. 131



192. A chromatic scale in minor follows exactly the notation of its *ascending Relative Chromatic Major*, starting from step 6 of that major and having the same form ascending and descending.

Ill. 132

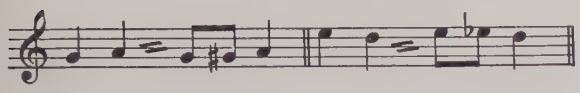


Exercise 90. Write a number of chromatic scales in both major and minor.

LESSON 61

Altered Tones

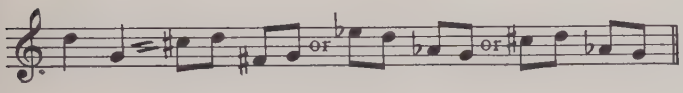
193. A tone foreign to the diatonic scale may be used



(a) to fill in the space between two adjacent degrees (Chromatic Passing Tones);



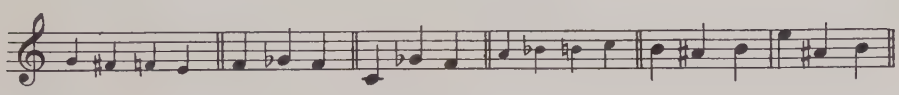
(b) as a substitute for the first of two adjacent degrees;



(c) as a neighbor of any scale degree.

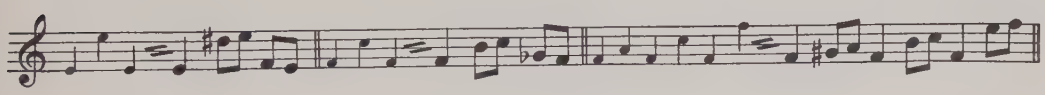
194. The notation of chromatic degrees conforms to Par. 190. However, where an altered step is not used in a three-tone chromatic line (as in Par. 193a) the *exceptions* of Par. 190 often have to give way to practical demands. A few instances follow; more will occur in later lessons.

Ill. 133



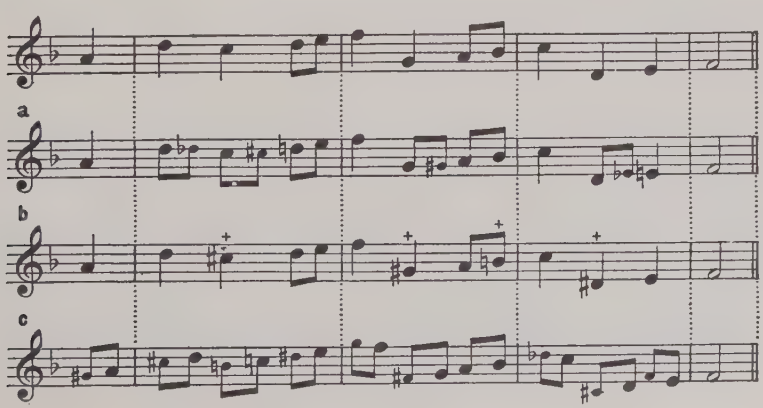
195. An otherwise objectionable interval is acceptable if to a neighbor of the second tone of a legitimate interval.

Ill. 134



Par. 193, as applied to melodic embellishment, is now illustrated.

Ill. 135

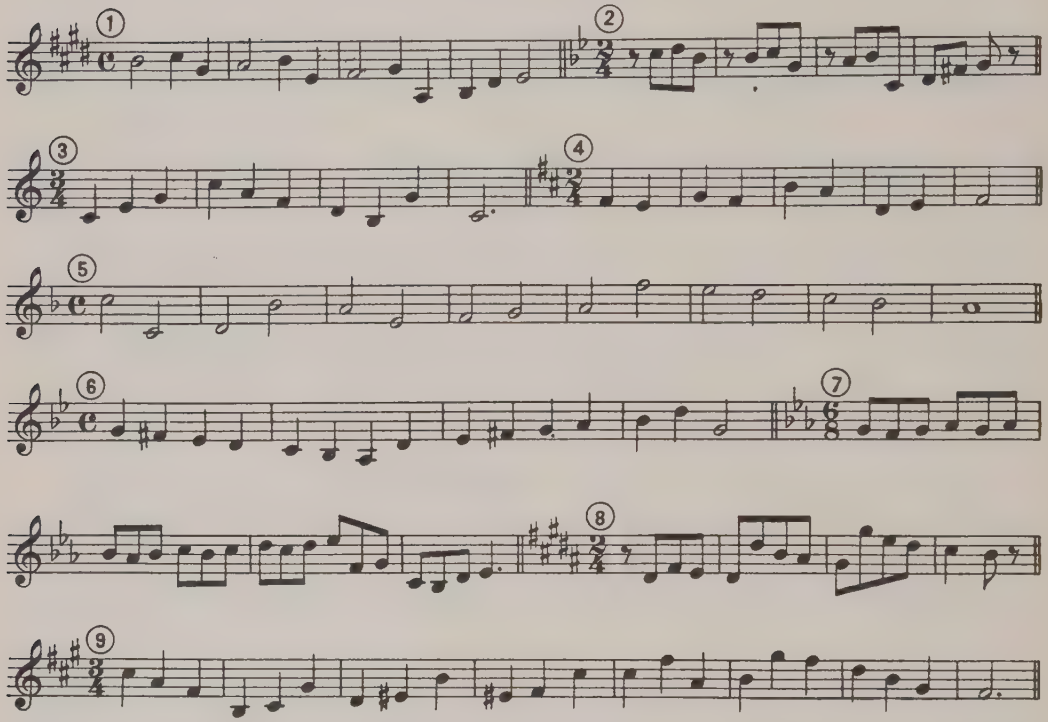


Exercise 91. The following melodies are to be embellished after the plan shown in Ill. 135.

No. 1: apply Par. 193 (a) and (b) to produce a rhythm of ♩ ♩ ♩ ♩

Nos. 2 and 7: apply Par. 193b with no change of rhythm.

All others: two notes should replace each printed one, any device of Par. 193 being applied.



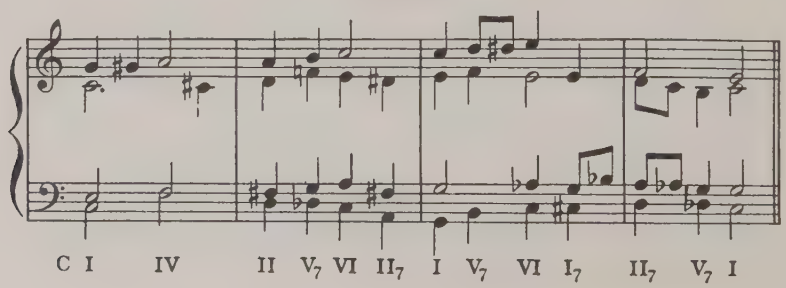
LESSON 62

Altered Chords (Analysis)

196. An altered chord is one that contains tones foreign to the key in which it is used. The alteration consists of raising or lowering (by accidental) a note or notes of a diatonic chord.

The following is in C maj. throughout, despite the accidentals.

Ill. 136



The purposes of alteration are, fundamentally, to soften otherwise harsh chords and to enrich the harmonic material.

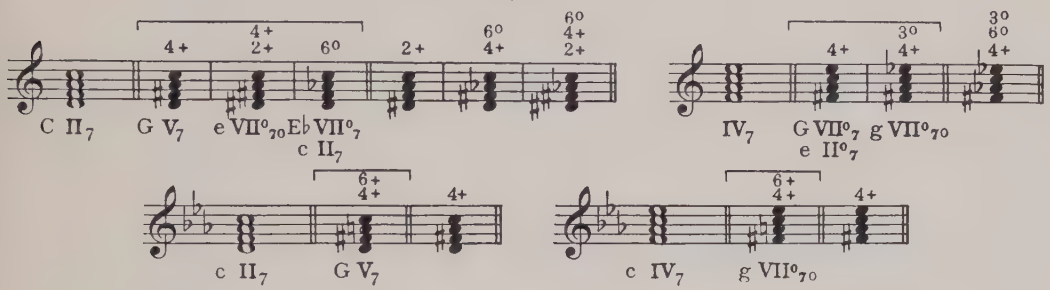
197. As affecting a single voice leading, it results in reducing a whole-step movement to a half-step. What is normally a leading of a whole-step is decreased to a half-step, the first of the two tones being brought nearer to the second before moving into it. (See Par. 193.)

198. Although the entire chromatic series is available within a key, the altered tones most used are:

Maj. Key—2^+, 2°, 4^+, 6° : Min. Key—4^+, 6^+.

The chords more frequently submitted to chromatic alteration are II_7 and IV_7 (II and IV) of both major and minor, which are followed by I or parts of V_9.

Ill. 137

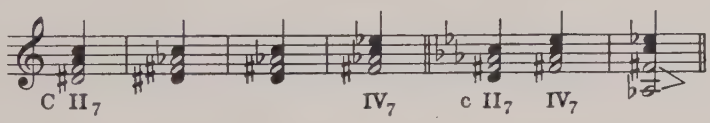


199. In Ill. 137 the chords marked with the ⌈¬⌉ are distinguished by being possible diatonic chords of other keys (as shown by the numerals under each chord).

The others contain tones not found in any one diatonic scale and are styled *Chromatic Chords.*

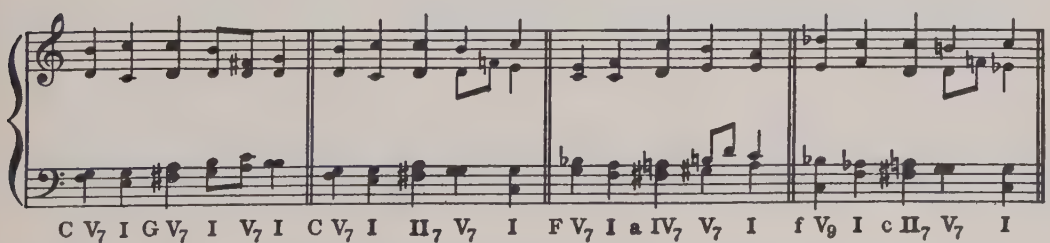
As these chords are used mostly in an inverted form, the dim. 3rd which each contains becomes an aug. 6th and the chords are broadly classed as *Aug. 6th Chords.*

Ill. 138



200. The complexity in analysis is to determine whether the alteration is a scale-tone of a new key or an altered tone of either the prevailing key or a new one. The chords which follow the altered one decide the question.

Ill. 139



In each of the above the heavy-typed chord does not seem to belong to the key of the previous chords. It appears to be V_7 of G.

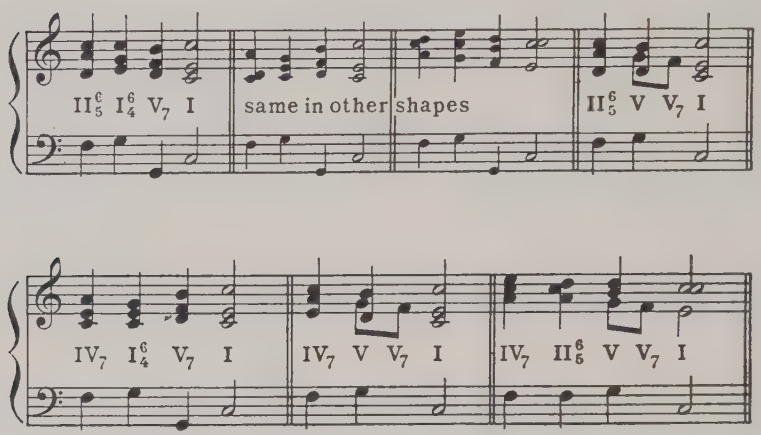
In (a) it is followed by a sufficient number of chords of G to confirm it as G V_7.

In (b) the chords preceding and following are decidedly of C maj. It is then an altered II_7 of C.

In (c) the preceding chords are of F maj.—those following are of A min. It is an altered IV_7 of the key which follows, A min.

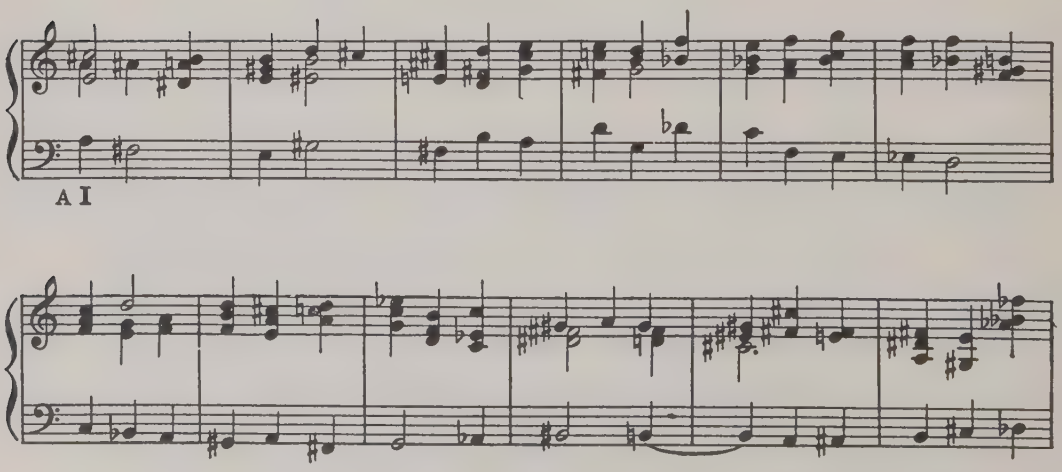
In (d) F min. precedes and C min. follows. As in (c), it belongs to the newer key. It is C min. II_7.

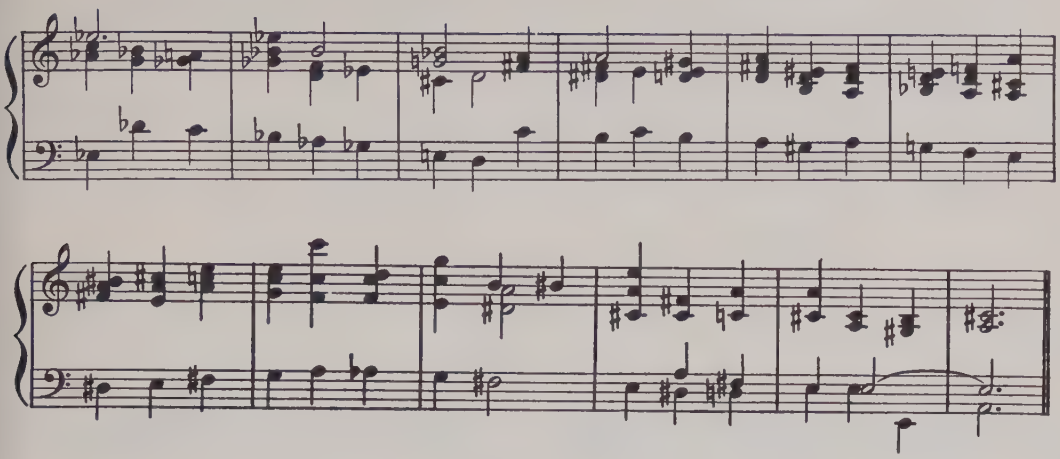
Exercise 92. Play the following in every major and minor key. As written work, chromatically alter the first chord of each measure according to Ill. 137. Do this in a number of keys.



Exercise 93. Analyse as in preceding exercises.

Rule: If a chord, foreign to the prevailing key, seems to be some part of V_9 of a new key but is immediately followed by positive chords (usually V_7, $VII°_7$ or I^6_4) of the prevailing or still another key, it is most probably an altered part of II_9.





LESSON 63

Cadences

201. A conventional Period ends with a *Perfect Cadence* which consists of the chords $V_{(7)}$–I, both with their roots in the bass and I with its root in the soprano. $V_{(7)}$–I, ending a period with either condition violated constitutes an *Imperfect Cadence.*

202. Most phrases, except the final ones of Periods, end in *Semi-Cadences*—any chord that gives the impression of momentary repose without halting the harmonic flow or making the succeeding phrase seem like the beginning of a new period.

The semi-cadence chord is usually I with its root not in the sop., I_6, VI or V (seldom V_7).

203. At any cadence point if $V_{(7)}$ is followed by any chord except I of the same key, it is called a *Deceptive Cadence.*

204. Occasional endings consisting of a part of II_9 moving into I are called *Plagal Cadences.* The Amen of a hymn or anthem is the best known example of this cadence.

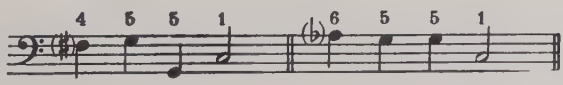
205. Preceding the V of a cadence is frequently I^6_4, and the most positive and conclusive endings result when some part of II_9 precedes the I^6_4.

Summarizing this last—the final chords of a Period are, conventionally:

$$\left.\begin{matrix} II \\ IV \\ II_7 \\ IV_7 \end{matrix}\right\} \begin{matrix} \text{altered} \\ \text{or} \\ \text{unaltered} \end{matrix} \left.\right\} I^6_4\text{–}V_7\text{–}I$$

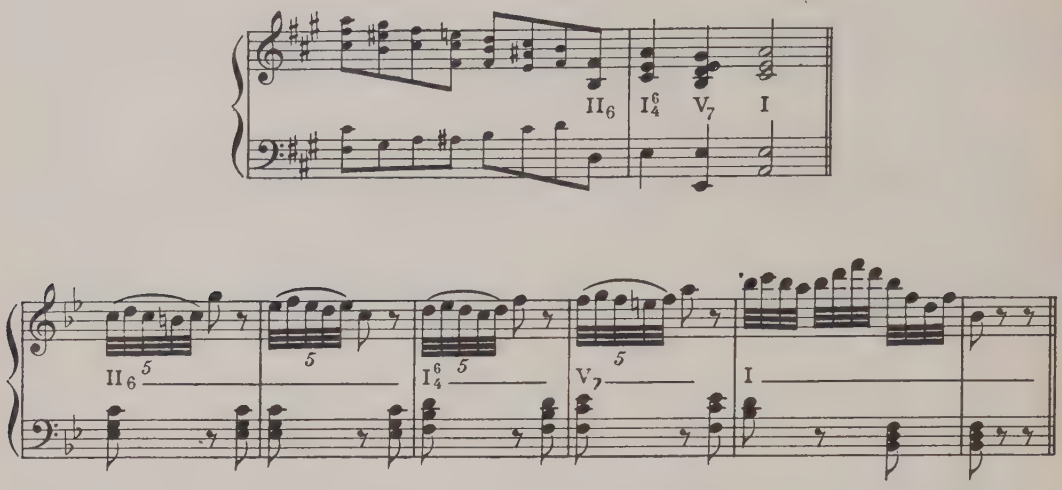
The bass of this cadence is (in scale-numbers) 4 5 5 1 or, less often 6 5 5 1. 4 may be raised or 6 lowered. (See Ex. 92.)

Ill. 140



In duration, each chord may extend any reasonable length from a fraction of a beat to several measures.

Ill. 141



Exercise 94. (a) Analyse many excerpts in the Supplement, naming the Cadences.
(b) Play Ill. 140 in every key.
(c) Review Ex. 92, learning the Cadences in every key.

LESSON 64

CADENCE $^{6}_{4}$

206. I^{6}_{4} used as described in Lesson 63 is called a *Cadence* $^{6}_{4}$.

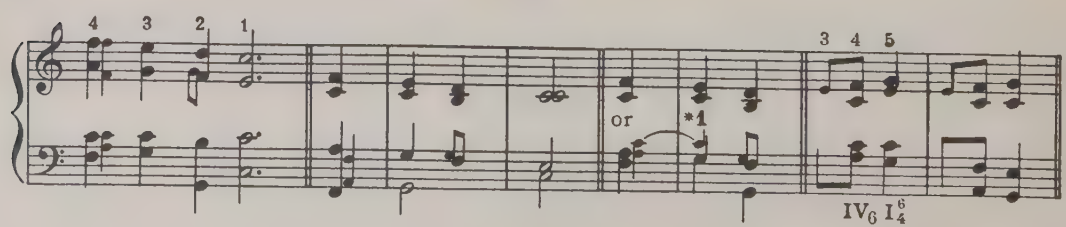
For the present the cadence $^{6}_{4}$ will be admitted only in the following connections:

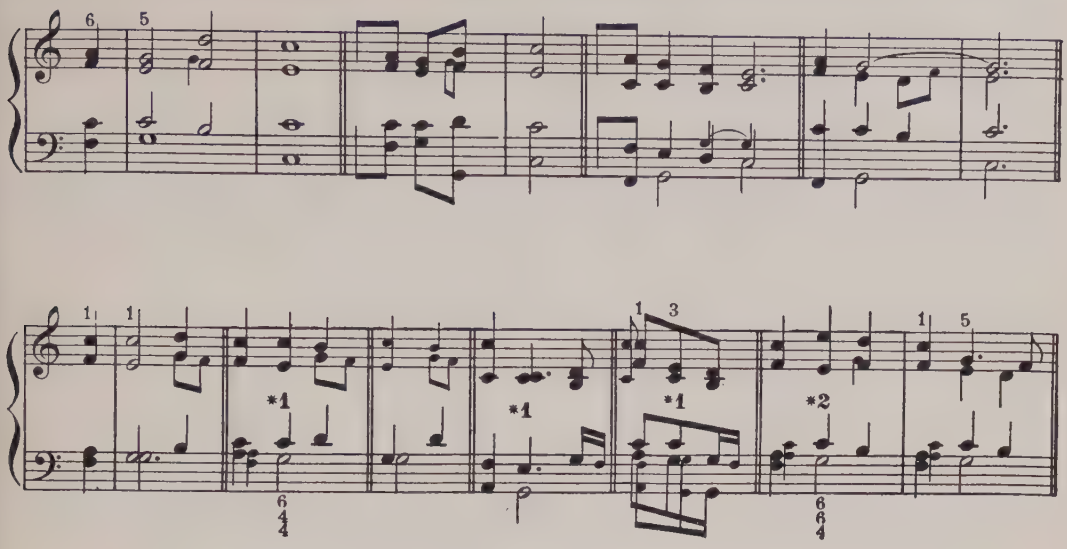
IV
IV_6
I
I_6
} I^{6}_{4}–$V_{(7)}$

207. In these connections, I^{6}_{4} occurs on the accented beat or, if the beat contains several chords, on the accented fraction except in a three-pulse rhythm ($^{3}_{4}$ $^{6}_{8}$ $^{9}_{8}$, etc.) which admits of I^{6}_{4} on the pulse immediately following the accent.

The following illustrate the cadence $^{6}_{4}$. The various rhythms are interchangeable; the small notes are substitutes for the larger adjacent ones or, in V, may be used in the rhythm indicated; the groups are equally good in the minor.

Ill. 142





*1 The root of I_4^6 is doubled
*2 The 3rd of I_4^6 is doubled
} See Par. 210

208. Melody patterns derived from Ill. 142.
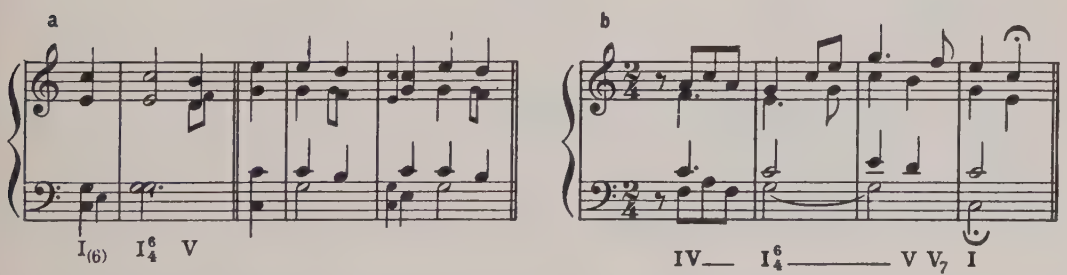
4.3
3.4.5
6.5
6.3
6.1
1.1
1.3
1.5
} to any notes permitting the chords $V_{(7)}$ I

$IV–I_4^6$

209. I or I_6 with any chord interval in the Soprano may be used instead of IV in Ill. 142. A few conventional forms appear in Ill. 143a.

Any or all of the cadence chords may be repeated in the same or different shape. (Ill. 143b.)

Ill. 143



The chord and melody patterns of this lesson serve to end motives and phrases early in the period, but such use should be sparing.

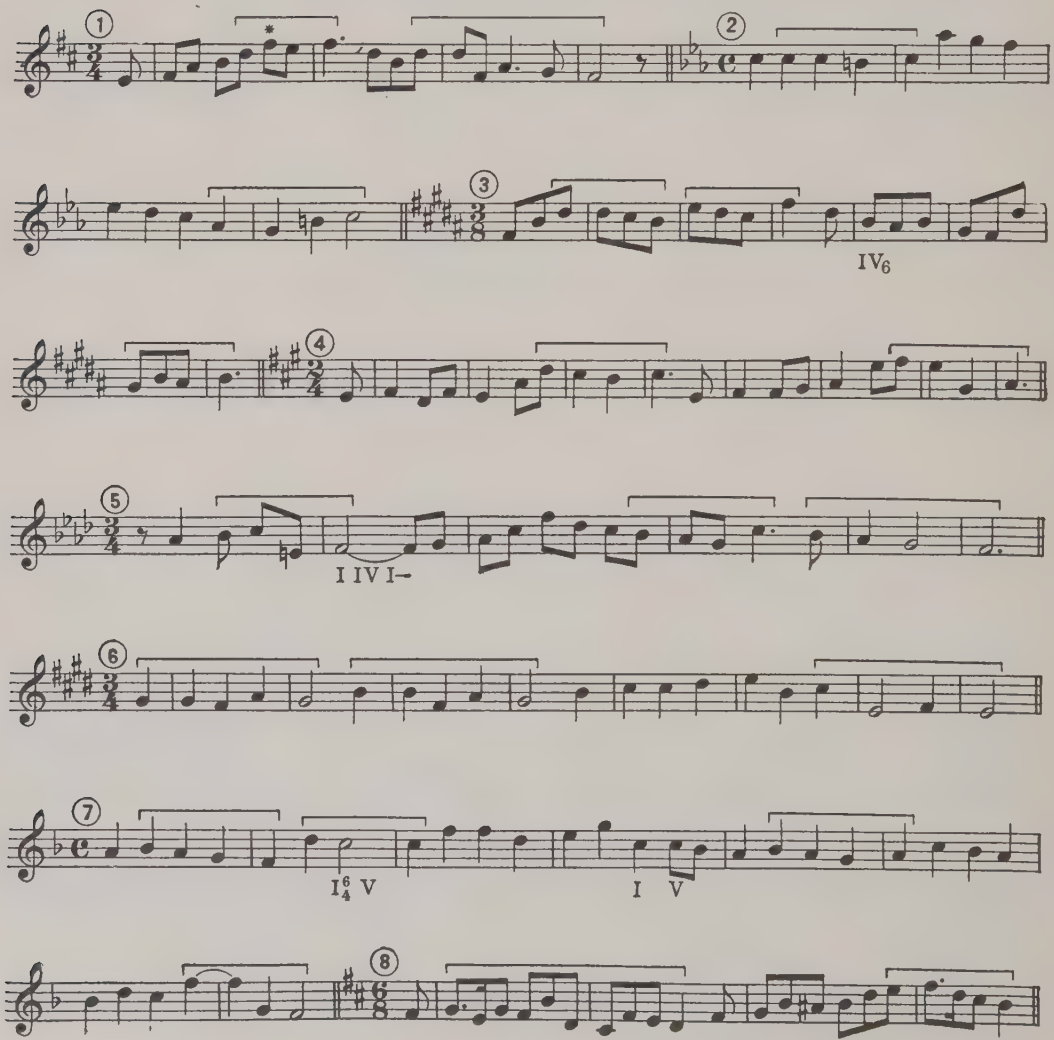
210. *A $\frac{6}{4}$ chord usually doubles its 5th (bass tone). The root or 3rd is doubled only exceptionally.* (See Ill. 142, *1 and *2.)

No interval may be omitted.

Exercise 95. Arrange rhythmically and harmonize. The slurs indicate chord repetition. Refer to Par. 207 for the location of the $\frac{6}{4}$ chord.

E	3·4·5·^{2}·1·	b min.	1·1·4·3·1·7·2·1
D♭	5·^{1}·1·2·1·	f♯ min.	5·6·5·5·5·
G♭	1·1·2·3·^{6}·5·7·1	c♯ min.	1·^{1}·3·2·1·
F	3·4·5·5·5·6·1·	g♯ min.	3·4·3·2·1·1·1
A	6·1·6·5·^{1}·3·2 5·7·1	e♭ min.	5·6·1·3·2·1

Exercise 96. Harmonize. The brackets indicate opportunities for the use of groups shown in Ill. 142 and 143.
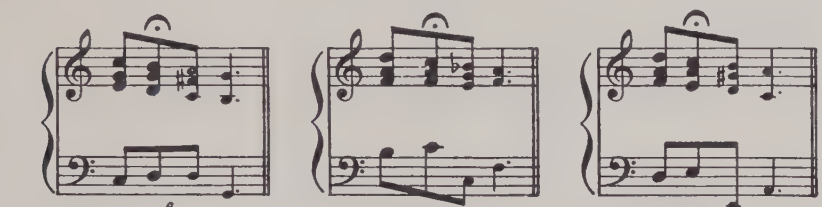


LESSON 65

Non-Cadence $\frac{6}{4}$'s

211. The characteristics shown by the $\frac{6}{4}$ in the cadence suggests a distinction which tends to circumscribe its usefulness. If given the slightest emphasis in rhythm, accent or duration, every $\frac{6}{4}$ sounds like a I^6_4. This is as it should be if the chord is actually I, but to make V, for instance, sound like I^6_4 is to force a modulation to the Dom. key.

Play the following: dwell on the $\frac{6}{4}$. Listen to the demand it creates for the chords written in small notes.

Ill. 144



212. Any $\frac{6}{4}$ except the Cadence I^6_4 must be grouped with other chords in such a way as to destroy the Tonic impression. This results when it occurs as:

1 the second of three chords having the same bass (Embellishing $\frac{6}{4}$).
2 the second of three chords having a diatonic bass (Passing $\frac{6}{4}$).
3 the second of three positions of the same chord (Chord repetition).
4 a chord repeated from some other position (triad or 6th) and moving into a triad on the same bass (Suspension $\frac{6}{4}$).

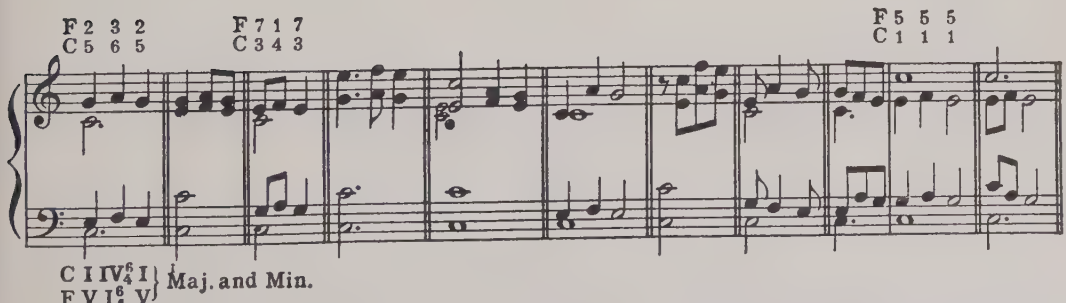
These will be explained in detail.

Embellishing $\frac{6}{4}$

213. As the *second of three chords with the same bass*, the chord material available at present will permit:
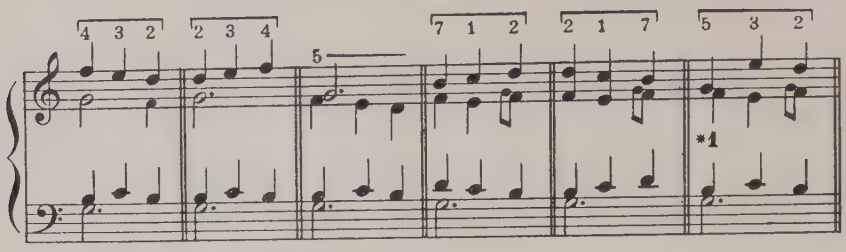
I–IV$^6_4$–I
V–I$^6_4$–V:
V–I$^6_4$–V$_7$:
V$_7$–I$^6_4$–V:
V$_7$–I$^6_4$–V$_7$:

Ill. 145



The first four and the last two measures are the conventional groups. Note the parallel 3rds or 6ths in two voices; also the fact that the bass-note is doubled in each measure.

Ill. 146



V_7 I^6_4 V_7 V I^6_4 V_7 Maj. and Min.
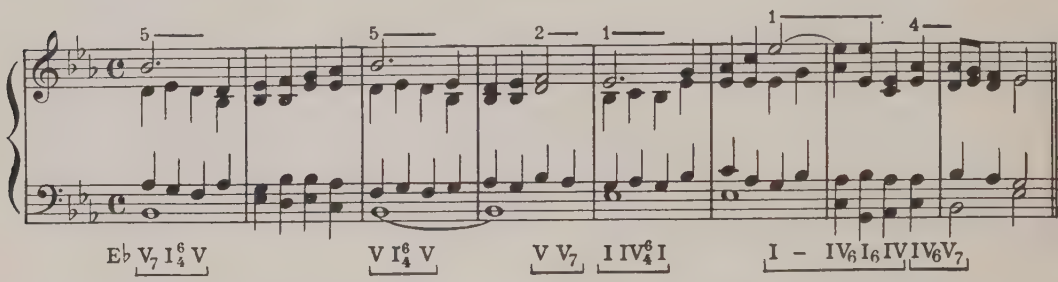
Observe the resolution of V_7 to I^6_4, all chord intervals moving normally, except that the bass-root is sustained.

*1 The Sop. root of V_7 skips up a 6th to the 3rd of I^6_4.

The small note may be considered a substitute for the adjacent large note or used in the indicated rhythm (8th notes).

214. The possibilities of harmonizing sustained melodies and basses are illustrated below. Note that with the present limited chord material, Steps 1 and 5 in the bass and 1, 2, 4, 5 and 7 in the soprano are the only tones admitting of *changing* harmonies.

Ill. 147

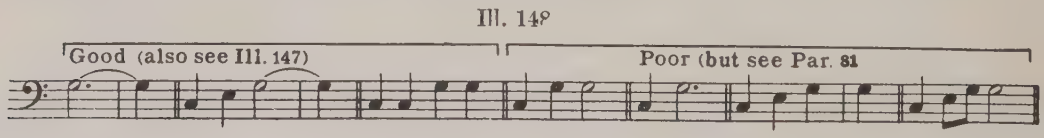


215. The repetition or sustaining of a bass-tone is seldom good:

(a) from a weak beat into a strong;
(b) from a short note into a long.

But a tone beginning on one strong beat may be continued through the succeeding weak beat and into the next strong beat.

Ill. 148



216. Successive $^6_4$s are forbidden; the same one may be repeated if the melody changes.
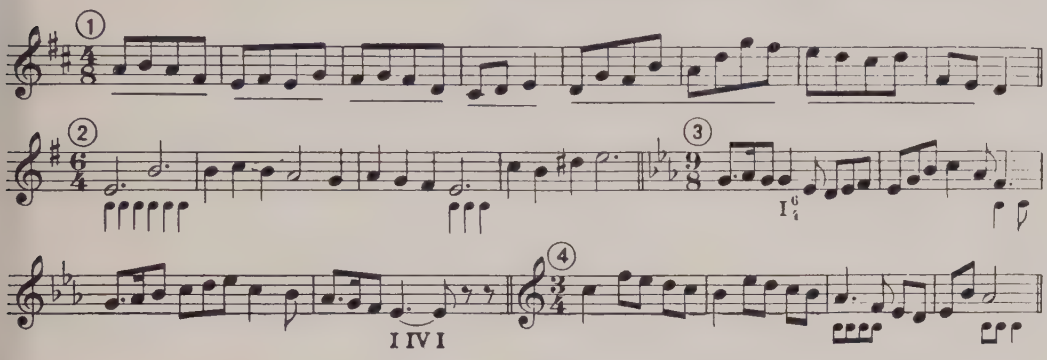
Exercise 97. Arrange rhythmically and harmonize. Use the material of the lesson as much as possible:

A♭	1.2.3.2.1.4.3.2.1	e min.	5.6.5.4.3.4.3.2.1
E	3.6.5.4.3.2.3.4.3	d min.	6. 1. 5.5.3.2.1. 5. 7.1.2.1
D	1.5.6.5.4.3.2.1	f min.	1.1.1.2.3.4.5.5.5.4.4.3.2.1

G 1.2.3.4.3. 6.5 7.1. 2.1

C♯ min. 1. 6. 5.1. 4. 3.2.2.1

Exercise 98. Harmonize, illustrating the lesson where possible. In No. 1 the dash under the groups calls for a sustained bass-tone.



LESSON 66

The Diatonic $\frac{6}{4}$

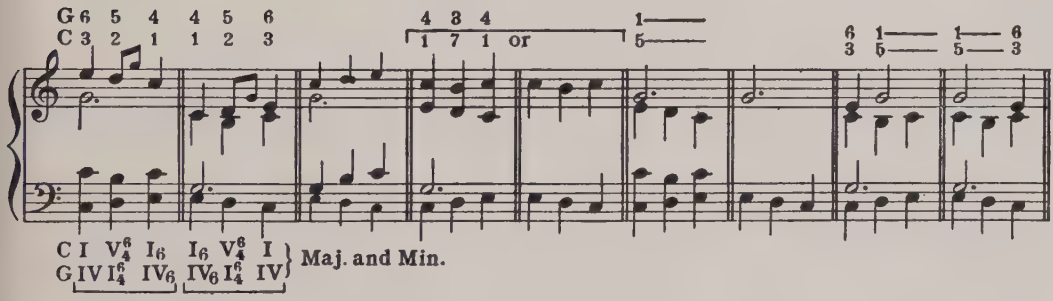
217. $\frac{6}{4}$ as second of three chords with diatonic bass.

In this connection (and with present chord material) the $\frac{6}{4}$ will occur in the groups:

$I–V^6_4–I_6$ $IV–I^6_4–IV_6$

$I_6–V^6_4–I$ $IV_6–I^6_4–IV$

Ill. 149



The above groups are strictly conventional and the melody patterns more indicative of the application of this lesson than those of Ill. 150.

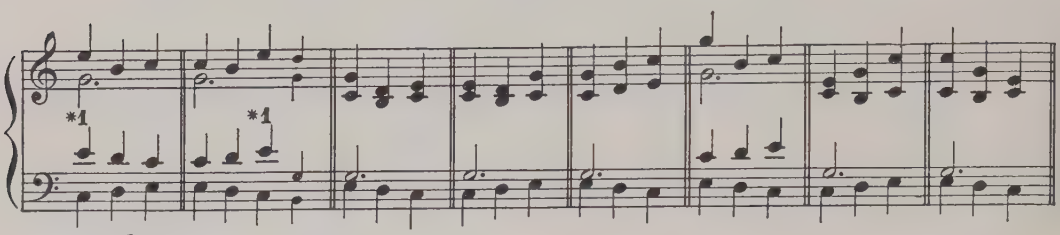
Usually the Bass and Soprano take the same tones in reverse order and another voice sustains throughout.

218. The Diatonic $\frac{6}{4}$ may occur on any beat but is seldom longer in value than the chords immediately preceding and following.

In melody harmonization it becomes a possibility when the chords selected show groups I–V–I or IV–I–IV and no objection exists to the positions shown in Par. 217.
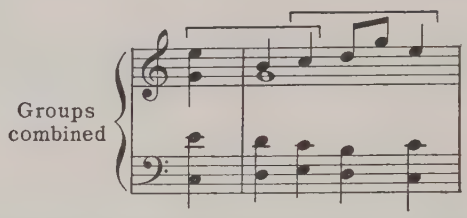
The following are all practical, though less common than those in Ill. 149. It is possible to combine groups, the last one becoming the first of the next.

Ill. 150



C I V_4^6 I
G IV I_4^6 IV } Maj. and Min.

*1 3rd doubled in I.



In the exercise of this lesson numerous opportunities for the use of the Diatonic $\frac{6}{4}$ will occur as a matter of routine practice. But, in general, such frequency is in bad taste and in later exercises or practical composition it should be an incident—a detail—and used only when a developed judgment proves its particular need. The same injunction applies to any of the material of this text.

Exercise 99. Arrange rhythmically and harmonize:

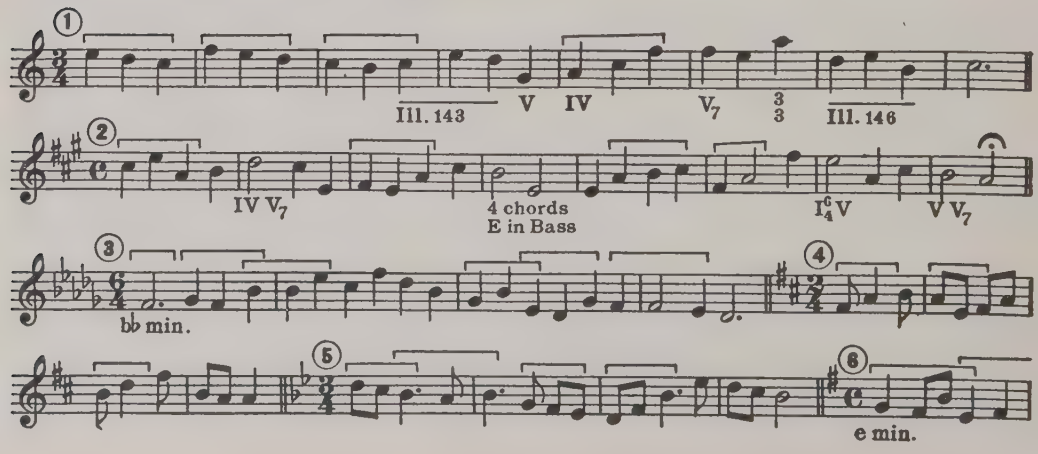
B 3·5·1·7·1·2·3 — d min. 3·5·5·6·1·1·3·2·1· (cadence)

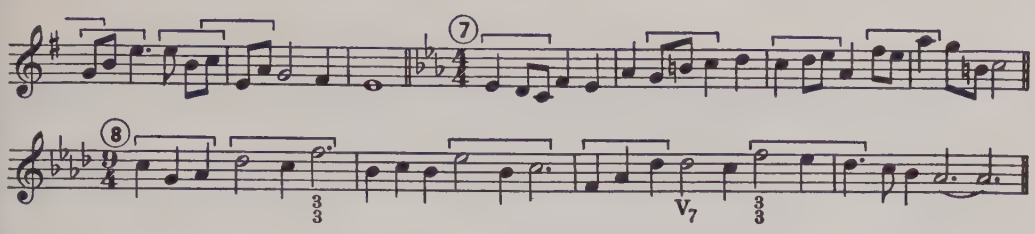
E♭ 1·1·1·6·5·5·3 — e min. 1·1·3·4·5·7·1·

F 1·7·1·2·3·5·5·5·5 — f♯ min. 5·6·5·3·4·5·3

A♭ + 3·2·1·7·1·6·5·2·1· — c♯ min. 1·7 3 2 1 6 5 5 3

Exercise 100. Harmonize. The brackets indicate lesson-patterns. Do not overlook the Cadence groups and possibilities of using the Embellishing $\frac{6}{4}$.





LESSON 67

$\frac{6}{4}$ IN CHORD REPETITION
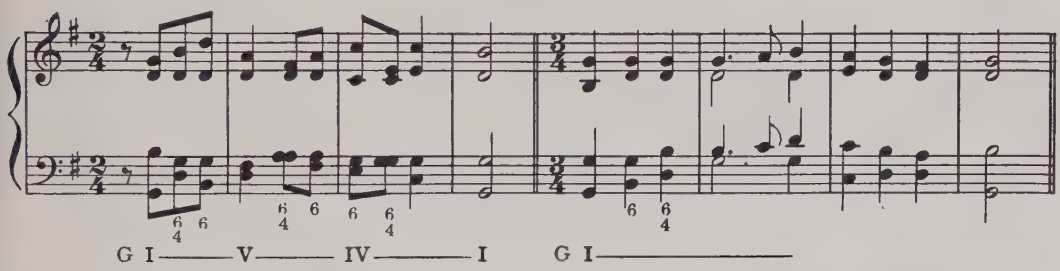
219. When used as the "second of three positions of the same chord" the $\frac{6}{4}$ will be preceded and followed by some other position of its own harmony (triad or 6th).

In this character it may not occur on the first count of a measure or on the first of any division of a triple rhythm.

With the permitted chord material it will be available when I, IV or V is used three or more times in direct succession (but not as the first or last of such repetitions).

The repetition may be the result of a bass arpeggiation or of actual changes in chord-shapes.

Ill. 151



220. (a) The bass may be embellished (Ill. 152) by the successive use of different chord-tones.

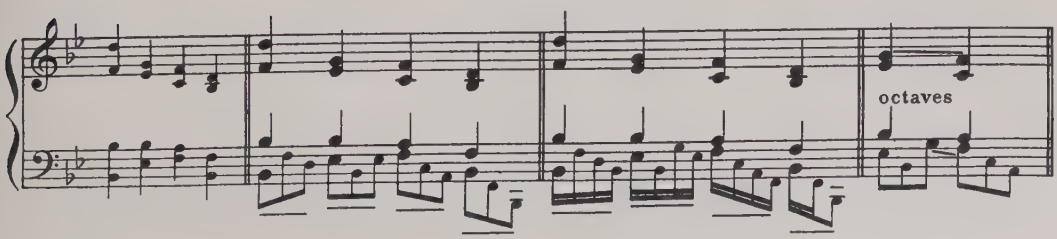
(b) The rules for the omission and doubling of tones and the crossing of voices are relaxed except as applied to the chord as first heard in its group.

(c) Particular care is needed to avoid consecutives when moving into a new group.

(d) The chord scheme must be correctly conceived before the embellishing is undertaken and the original bass becomes the first (and often the last) of its group.

(e) The chord positions are named according to the original bass tone.

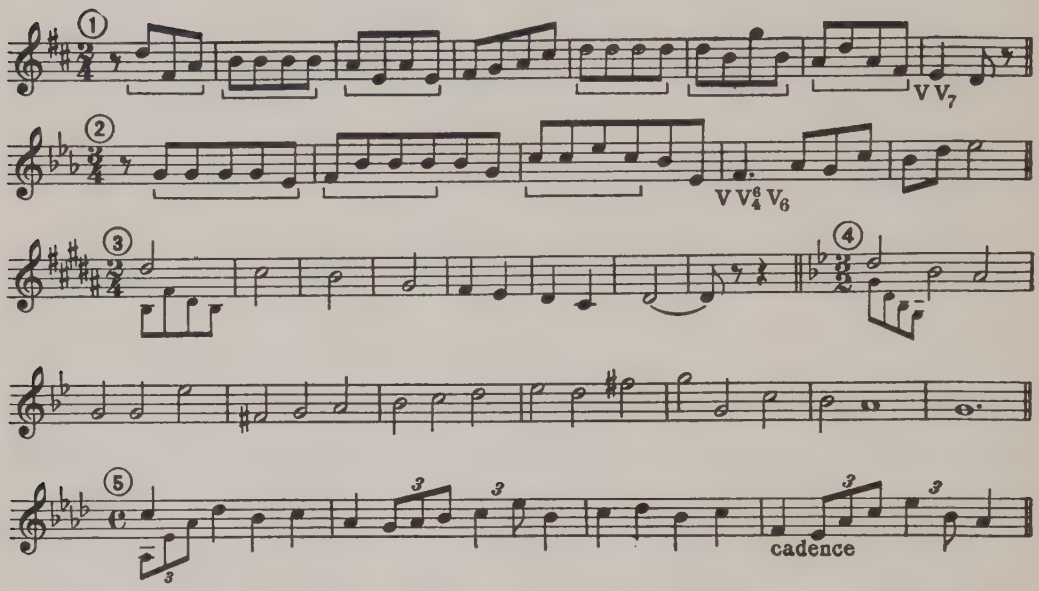
Ill. 152



Exercise 101. Harmonize. The material of this lesson should be used where possible.

In Melodies 1 and 2, the brackets under the notes suggest the use of $\frac{6}{4}$s in chord repetition.
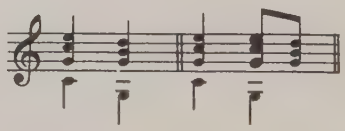
In Melodies 3, 4 and 5 the bass is to continue in the rhythm indicated in the first measure of each. Ill. 152 is a model. The better plan is to harmonize as in previous lessons and then embellish the bass.



LESSON 68

The Suspension $\frac{6}{4}$

221. In this character the $\frac{6}{4}$ is preceded by another position of the same chord and followed by a triad having as its root the bass of the $\frac{6}{4}$.
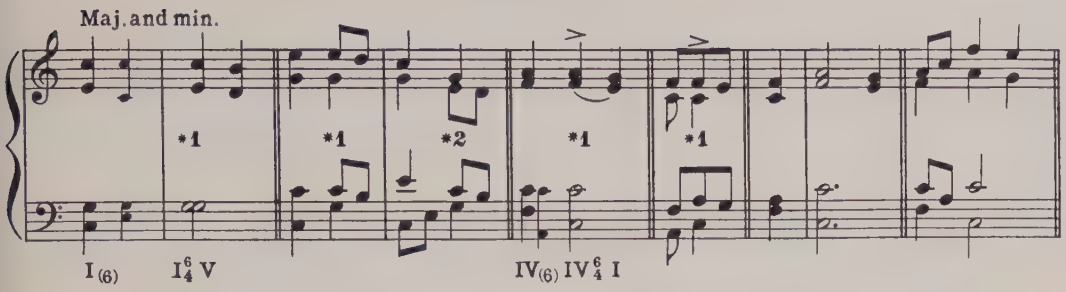


It is called a Suspension $\frac{6}{4}$ because it acts merely to delay or suspend the entrance of the following triad.

It corresponds to the $\frac{6}{4}$ in Ill. 143a (cadence type) except that other $\frac{6}{4}$s besides I^6_4 are involved and it is not confined to the cadence.

For the present, the Sus. $\frac{6}{4}$ will occur only in the progressions·

$\left.\begin{matrix} I \\ I_6 \end{matrix}\right\} I^6_4\text{–}V$ $\qquad$ $\left.\begin{matrix} IV \\ IV_6 \end{matrix}\right\} IV^6_4\text{–}I$

Ill. 153



Observe: *1 The melody-tone is repeated into the $\frac{6}{4}$ and then descends one degree. Two voices move in parallel 3rds or 6ths while another doubles the bass and is sustained.

*2 The stationary tone is in the Sop. It is more usual for the moving tones to be in the melody.

222. The Sus. $\frac{6}{4}$ is found on an accented beat or the first part of a divided beat or, in triple rhythm, on the first or second divisions.

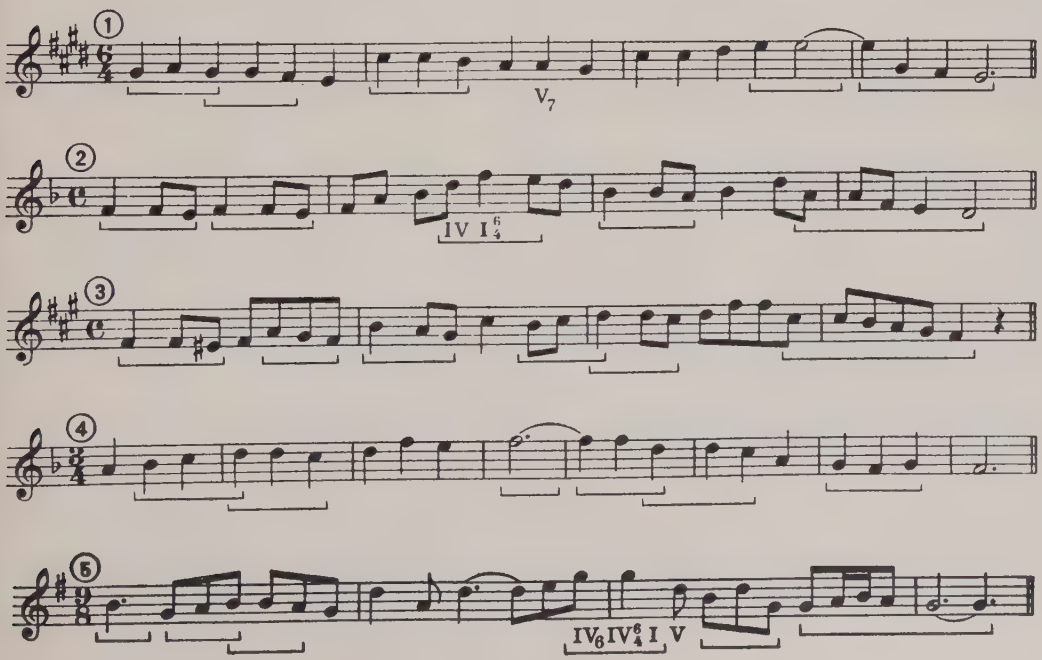
223. Melodic indications of the possible use of the lesson groups are:

1.7, 3.2, or 5 preceded by some tone of I.
4.3, 6.5, or 1 preceded by some tone of IV.

or more usually:

1 . 1 . 7	6 . 6 . 5
3 . 3 . 2	4 . 4 . 3
I–I$^{6}_{4}$–V	IV–IV$^{6}_{4}$–I

Exercise 102. Harmonize, using the material of this lesson where applicable. The brackets under the notes suggest the possibility of some use of the $\frac{6}{4}$.



LESSON 69

$\frac{6}{4}$ WITH GIVEN BASS

224. $\frac{5}{3}\,\frac{6}{4}\,\frac{5}{3}$ under one note indicates a use of the *Embellishing* $\frac{6}{4}$.
A "triad,–$\frac{6}{4}$–triad" on one bass note. One voice contains the notes a 5th, 6th and 5th above the bass, another has the 3rd, 4th and 3rd above, the remaining voice doubles the bass and has a like value.

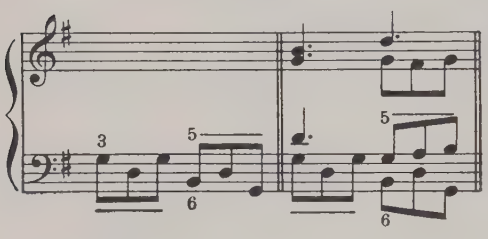
$\frac{6}{4}\,\frac{5}{3}$ illustrates the *Cadence* or *Suspension* $\frac{6}{4}$.
A "$\frac{6}{4}$–triad" on the same bass. The 6th above moves to the 5th; the 4th above moves to the 3rd; the bass is doubled.

$\frac{6}{4}\,\frac{5}{\#}$–$\frac{6}{4}\,\frac{5}{\natural}$ A♯ or ♮ takes the place of a 3 and calls for the 3rd above the bass to be affected by the accidental.
A diatonic bass calling for "triad–$\frac{6}{4}$–6" or "6–$\frac{6}{4}$–triad" illustrates the *Diatonic* $\frac{6}{4}$.

ø A line through a figure requires that interval above the bass to be chromatically raised (Par. 15).

225. Observe the distinction between a dash *over* a note and one *under*. The one above requires only the soprano to be unchanged. The other voices may or may not move, according to circumstances.

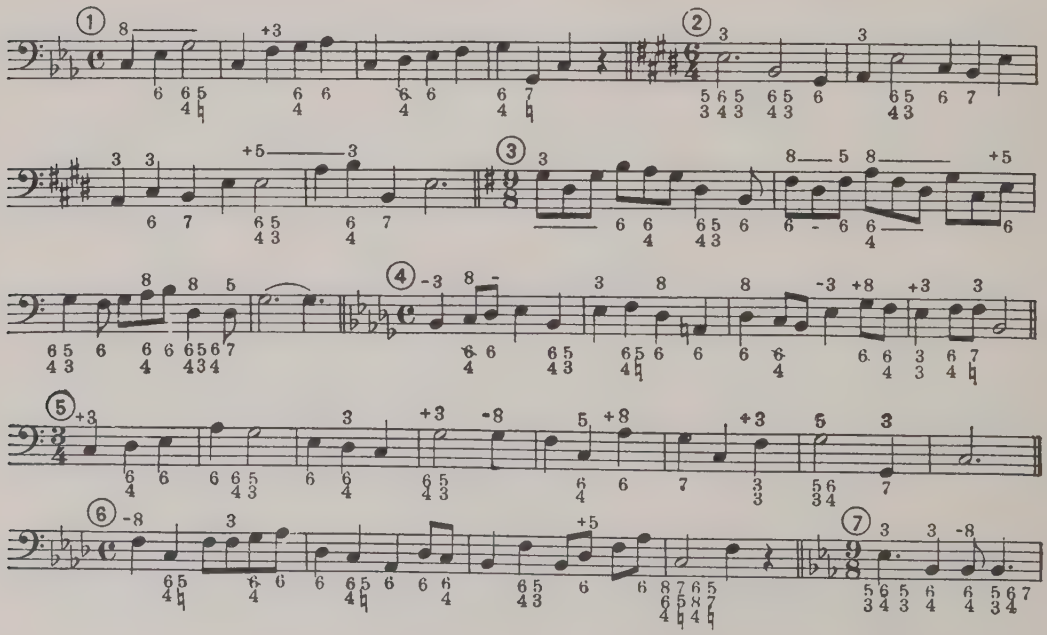
Ill. 154

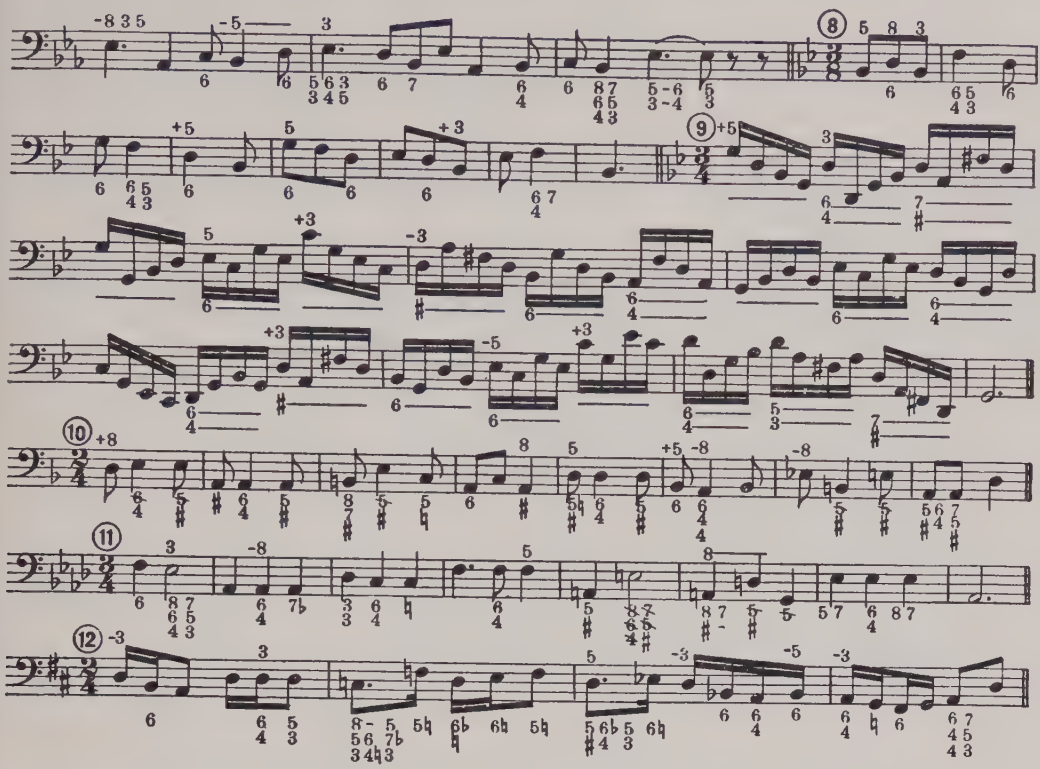


The dash under the bass requires that the entire chord be retained in the last shape indicated.

Exercise 103. The last three basses call for modulations.

In Ex. 9, harmonize as if the last three 16ths in each group were not present.





LESSON 70

Inversions of V_7

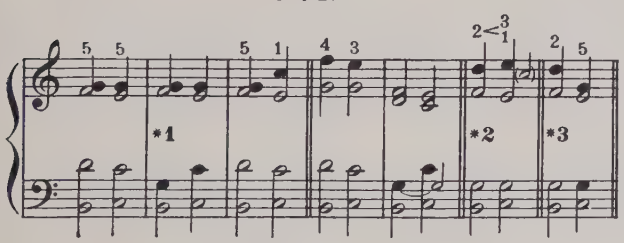
226. Compared with V_7, the inversions are less definite, more pliable, and of greater use elsewhere than in the cadence.

The comparatively longer tones, if calling for the Dom. harmony, lend themselves to V or V_7. The shorter and less important tones require inversions.

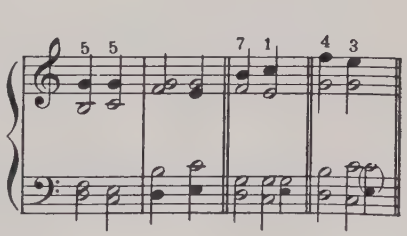
In brief, the root position impresses by its solidity and definiteness; the inversions *pass on* immediately, acting as intermediate chords between other and more important ones.

227. The harmonic and melodic results of the progression from an inverted V_7 to I are shown below. Distinctive features are indicated by "black" notes.

Ill. 155



Ill. 156



First inversion: V^6_5.

*1 The root is doubled and 5th omitted. This is rare but permissible.

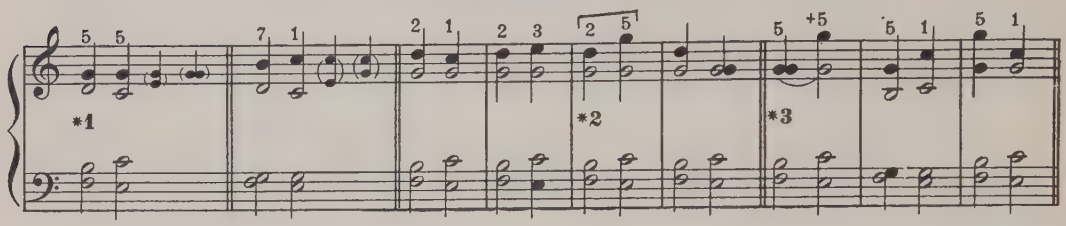
*2 The 5th in the Sop. may ascend or descend one degree.

*3 Here, the Sop. 5th moves *down* to the 5th of I—an extremely rare leading; note the doubled 5th in I.

Second inversion: V_3^4 (Ill. 156).

Note that the bass 5th may ascend or descend one degree. The descent is more usual.

Ill. 157



Third inversion: V_2^4.

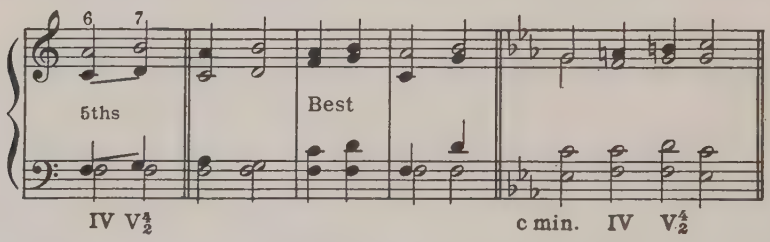
*1 The 5th in an inner voice usually descends one degree but may move as shown by the small "black" notes. In the soprano it may move to any interval of I.
*2 This pattern 2 . 5 is the best melodic result of V_2^4–I.
*3 The root may be doubled and 5th omitted if necessary.

228. Any position of I or V (including I_4^6 and V_4^6) connects with any inversion of V_7.

IV and IV_6 (not IV_4^6) also move into the inversions of V, but more care must be exercised to avoid consecutives and bad leaps.

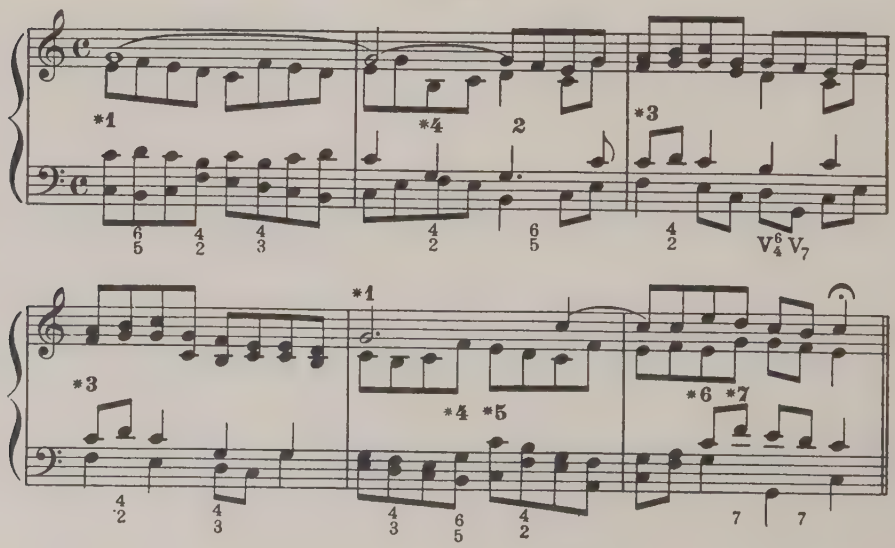
The melody pattern 6 . 7 admits of the harmonization IV–V_2^4. (Ill. 116, *2.) Note below that in the minor it is necessary to chromatically raise 6.

Ill. 158



Analyse the following, noting the use of the inverted V_7.

Ill. 159



*1 The sustained G requires a changing harmonization and a flowing bass. Here the alto is the real melody.

*2 V_6 changes to V_5^6. Only the Sop. needs to move—from scale-tone 5 to 4.

*3 The illustration is possible in C minor. At this point A would require a ♮ (Par. 228).

*4 The inverted V_7 doubles its root here.

*5 What justifies the descending leading-tone?

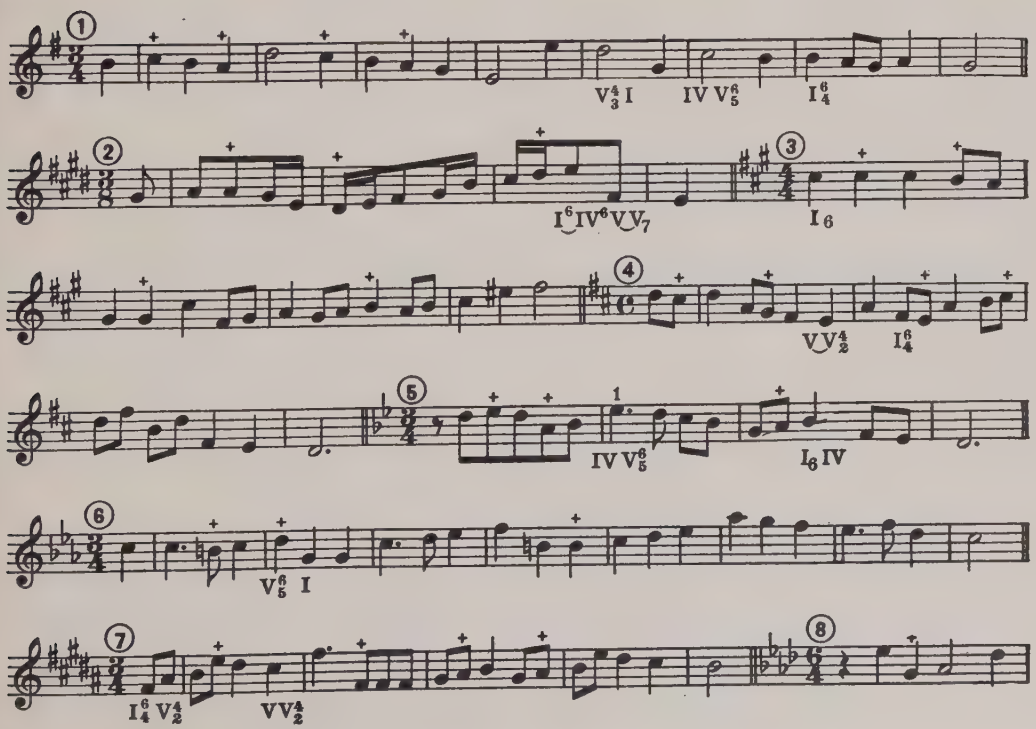
*6 Note the doubled 3rd in I.

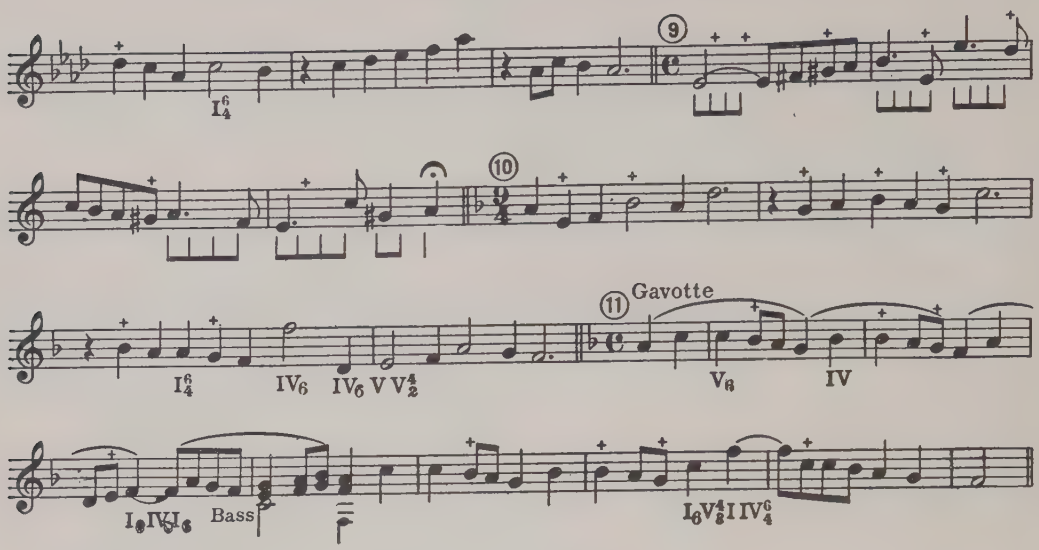
*7 This V_7 omits the 3rd instead of the 5th. Use sparingly.

Exercise 104. The patterns permitting the use of the inverted V_7 are too numerous to list. The following, are practical in both major and minor. Arrange in rhythmic groups and harmonize as indicated by the Roman numerals.

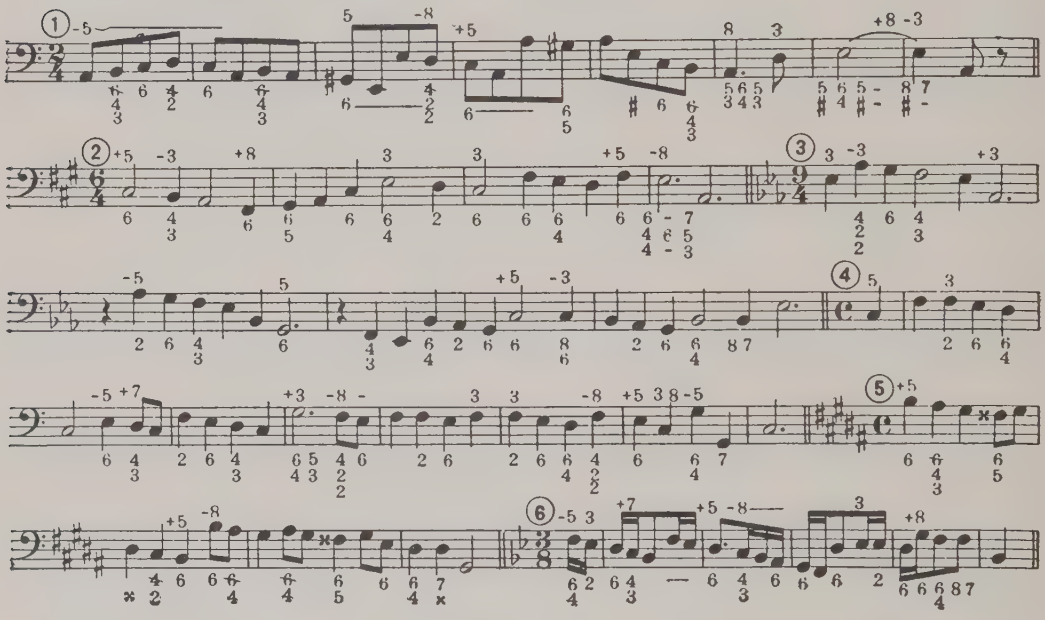
D $\overset{5\cdot4\cdot3}{I_6\ V_3^4\ I}$	f min. $\overset{6\cdot5\cdot4\cdot3}{IV\ \ I_6\ V_3^4\ I_6}$	B♭ $\overset{4\cdot3\cdot2\cdot1}{IV_6\ I_4^6\ V_2^3\ I_6}$	a min. $\overset{1\cdot7\cdot1}{I\ V_3^4\ I_6}$
G $\overset{1\cdot2\cdot3}{I_6\ V_5^6\ I}$	e min. $\overset{5\cdot6\sharp\cdot7\cdot8}{I_6\ IV\ \ V_2^4\ I_6}$	A♭ $\overset{4\cdot\ 7\cdot1}{IV\ \ V_2^4\ I_6}$	G♭ $\overset{6\cdot\ 7\cdot1}{IV\ \ V_2^4\ I_6}$
b min. $\overset{5\cdot6\sharp\cdot7\cdot8}{I\ \ IV\ V_2^4\ I_6}$	D♭ $\overset{5\cdot4\cdot3\cdot2}{I_6\ V_5^6\ I\ \ V}$	E♭ $\overset{5\cdot4\cdot3}{V_6\text{—}\ \ I}$	f♯ min. $\overset{5\cdot4\cdot3\cdot2}{V_4^6\text{—}\ \ I\ \ V}$
a min. $\overset{1\cdot4\cdot3}{I_6\ V_3^4\ I}$	B $\overset{1\cdot4\cdot3}{I\ V_3^4\ I}$	g min. $\overset{5\cdot\ 7\cdot1}{I_6\ V_3^4\ I}$	D♭ $\overset{5\cdot\ 7\cdot1}{I_4^6\ \ V_2^4\ I_6}$
A $\overset{5\cdot\ 4\cdot3\cdot2\cdot1}{V_6\text{—}\ \ I\ \ V_2^4\ I_6}$	G $\overset{4\cdot5\cdot\ 1}{IV\ V_2^4\ I_5}$	B♭ $\overset{6\cdot5\cdot5\cdot4\cdot3}{IV\ V_2^4\ I_6 V_3^4 I}$	E♭ $\overset{3\cdot\ 5\cdot\ 1}{I_4^6\ \ V_2^4\ I_6}$

Exercise 105. Harmonize. The + indicates the possibility of an inverted V_7.





Exercise 106. Inverted V_7 with given bass.



LESSON 71

Modulation by Means of V_7

229. Modulation is most easily effected by the use of a chord (or chords) characteristic of the new key.

The most distinctive chords of a key are V_7 and $VII°_{7°}$.

They are, therefore, the most frequently used of modulatory mediums.

The last chord of the old key is more often I (or VI).

The problem of this lesson is the chord formula.

Old key	New key
I_6 or I	V_7 (or inversions) $I_{(6)}$
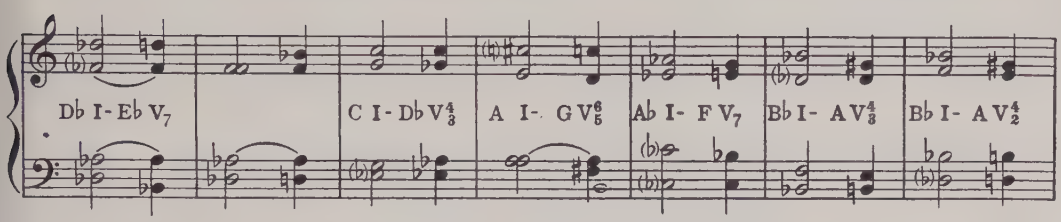
230. General rules (I to the new V_7):

(a) Keep all common tones in the same voice.
(b) Tones and their chromatic alterations must occur in the same voice.
(c) The root or 3rd of the I is the best soprano tone.
(d) The position of V_7 as regards the Soprano and Bass will depend on how I leads into it.

The voice-parts in all illustrations of this lesson are interchangeable except that the first chord may not be a $\frac{6}{4}$ position.

231. The following shows all the problems that might occur in going into a key ½, 1, 4½, 5 and 5½ steps higher than the original key.

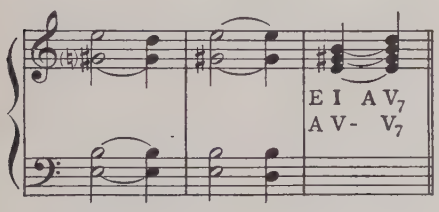
Ill. 160



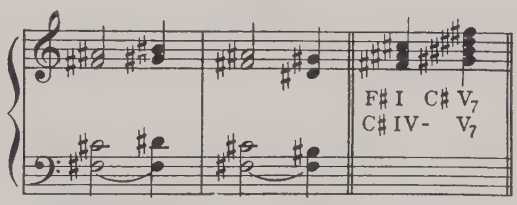
232. From I to its SD V_7 is exactly the same progression as V–V_7 with all its possibilities.

From I to its Dm. V_7 offers the same problems as occur in IV–V_7. (See Ill. 120.)

Ill. 161



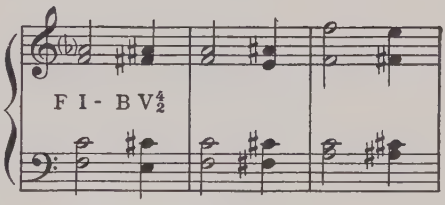
Ill. 162



233. *To the key 3 steps higher: All voices move a half-step.*

Consecutive fifths moving by half-steps are correct between any two voices not including the Sop. providing one or both the remaining voices move contrary to them.

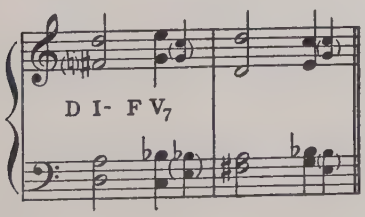
Ill. 163



234. To a key 1½ higher:

If both the I and V_7 have their roots in the bass, the three upper voices move contrary to the bass.

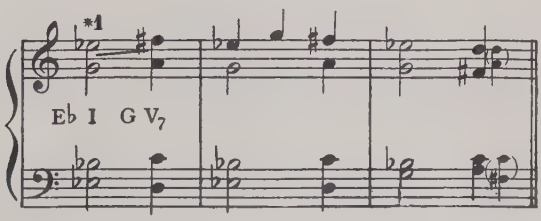
Ill. 164



To a key 2 steps higher:

To avoid the bad voice-leading at *1, double the 3rd in the I or invert the V_7.

Ill. 165

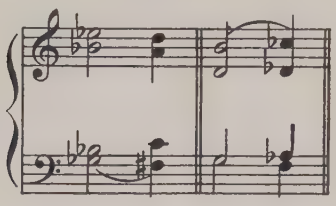


235. Enharmonic alteration.

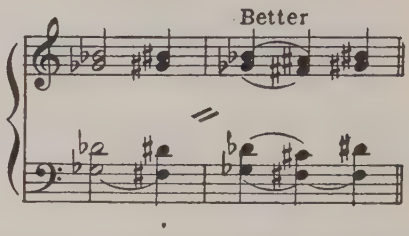
Tones common to the two chords but having different notations are retained in the same voice.

Rather than force a voice to sing a chromatic whole step, renotate one of the chords as shown below.

Ill. 166



Ill. 167



Exercise 107. To require a modulation from every key to every other key is perhaps an unreasonable demand—although the results will compensate for the time spent. However, a variety of experience will be gained by writing a series of modulations, the first from any key to the one a half-step higher, the second from the new key to the one a whole step higher, etc.

i.e., D to E♭; E♭ to F; F to A♭, etc.

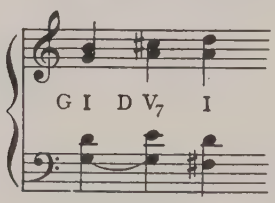
Use the chord pattern I (old key)—V_7–I (new key).

Alternate using I and I_6 as a first chord.

Modulate from Maj. to Maj.; Maj. to Min.; Min. to Maj.; Min. to Min.

The Cadence $IV_{(6)}$–I^6_4–V_7 I may be added to each modulation.

Exercise 108. Continue the following exercise through the indicated keys, using V_7–I of each key. Any I may be repeated in a new position if desired.



e a F E c B♭ B D♭ F G♭ d b♭ C G

LESSON 72

Modulation to the Dom. Key

236. The most natural of modulations is that to the Dom. key:

C to G
c to G
c to g
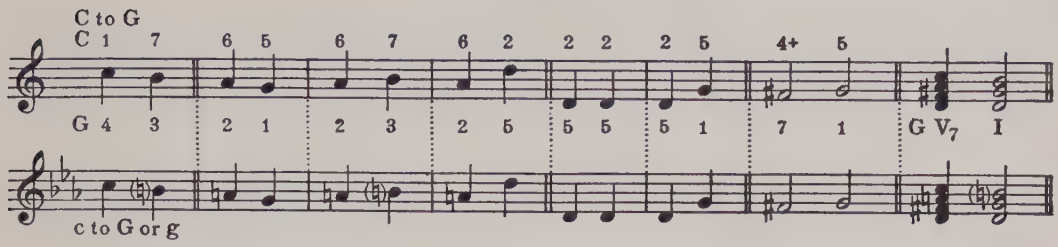
It becomes a possibility wherever the given melody admits of the new key V_7–I or the cadence formula

Old key (I –(V^6_4
Dm. (IV–(I^6_4–V_7–I

at phrase endings.

The variety of melodic indications are evident in the following:

Ill. 168
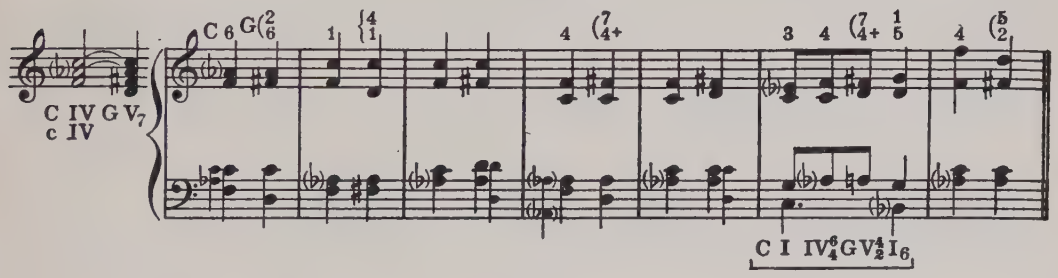


The presence of an accidental (except minor key 6+ and 7) makes a modulation imperative for the present. The other patterns are merely suggestive and the use of a modulating harmonization with them a matter of judgment and taste. It is not advisable to enter the *same* new key more than once in a period.

237. With the available chord material, the new harmonic formulæ are:

I —— Dm. V_7–I
IV —— Dm. V_7–I
V —— Dm. V_7–I

238. The progression IV–Dm. V_7 involves an application of the rules—"common tones, enharmonic tones, tones and their chromatic alterations kept in the same voice."
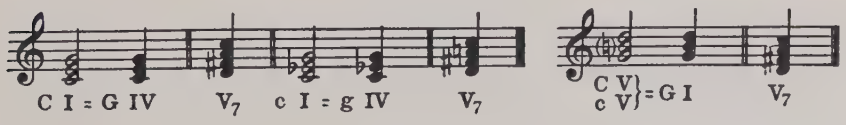
Ill. 169



(Accidentals in brackets are minor key scale-steps.)

239. Old key I is identical with IV of the Dom. key.
Old key V is identical with I of the Dom. major key.
For their connections with the new V_7 review Lessons 50 and 56.
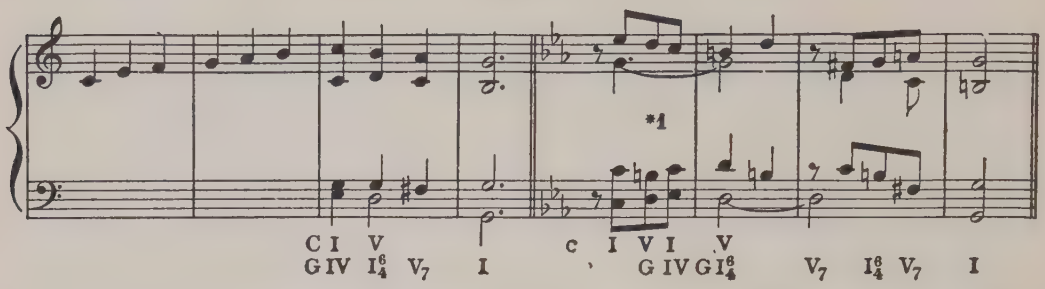
Ill. 170



240. Where the melody permits, the cadence formula, IV–I_4^6–V_7 of the Dom. key, forms a satisfactory modulation.

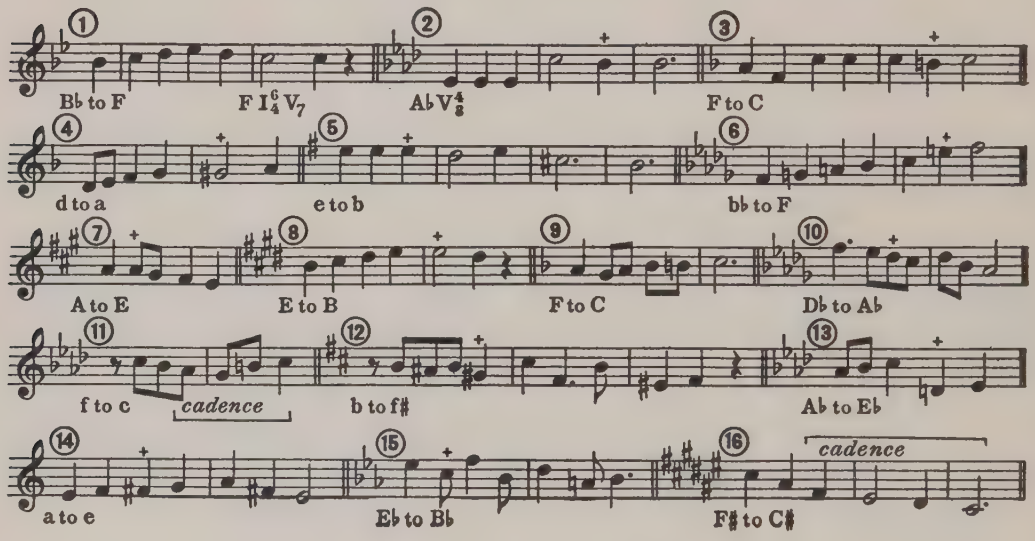
Observe at *1 below that, in this connection, min. key I is used as Dm. maj. key IV with lowered 3rd.

Ill. 171



241. As a modulation consisting of V_7–I is in itself a cadence, it is best to use an inversion of the V_7 (rather than the root position) if the modulation occurs elsewhere than at phrase endings. This will avoid positive endings where they are undesirable and save them for the real cadences.

Exercise 109. Harmonize, modulating to Dom. key as indicated.



LESSON 73

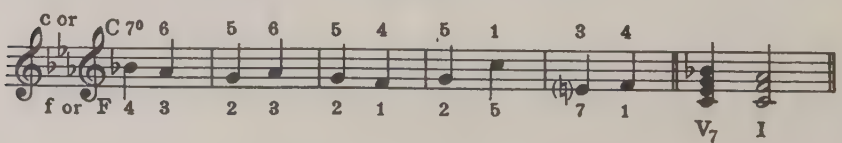
Modulation to the Sub-Dom. Key

242. If a modulation to the Dm. has occurred, the return to the original key is to the SD of the Dm.

C to G: G to C.

The melodic patterns admitting of SD V_7–I are:

Ill. 172



The new harmonic connections are:
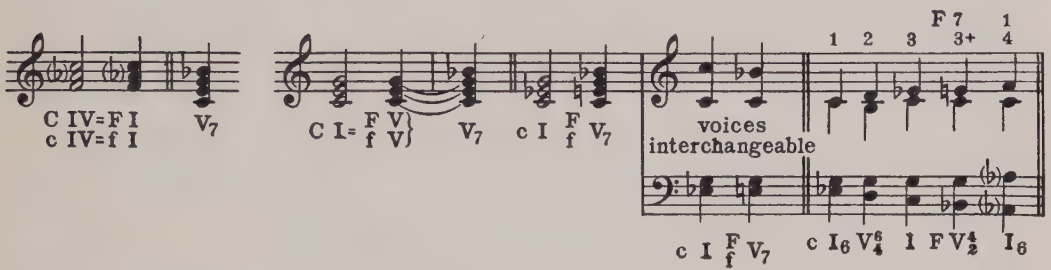
I —SD V_7–I
IV—SD V_7–I
V —SD V_7–I
V_7—SD V_7–I

243. (a) As Maj. key I is SD V,
I to SD V_7 is the same as any V–V_7 progression.

Min. key I differs from SD V in the size of the 3rd. Chromatic progression is involved.

(b) As IV is SD I,
IV to SD V_7 is the same as any I–V_7 progression.

Ill. 173



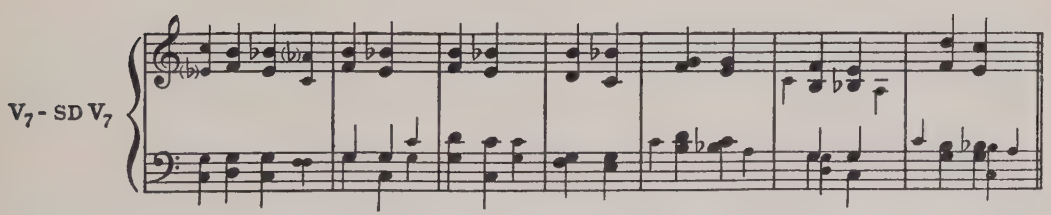
244. The distinctive progressions of the lesson are $\frac{V}{V_7}$–SD V_7.

Analyse the following illustrations carefully. Note that one voice must sing $\overset{\text{SD}}{7}$ $\overset{4}{7°}$. $\overset{3}{6}$

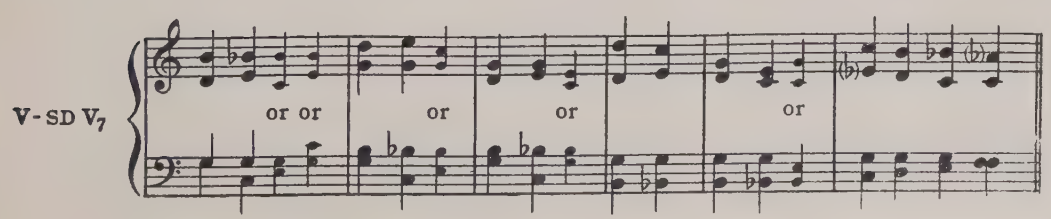
Also observe that V_7–SD V_7 corresponds to the conventional V_7–I except in one particular:

root is retained or skips to root of SD V_7;
5th ascends or descends one degree;
7th descends one degree;
3rd *descends chromatically.*

Ill. 174

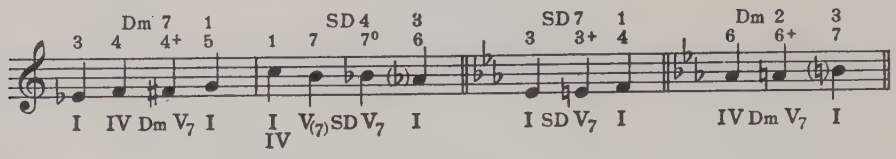


Ill. 175

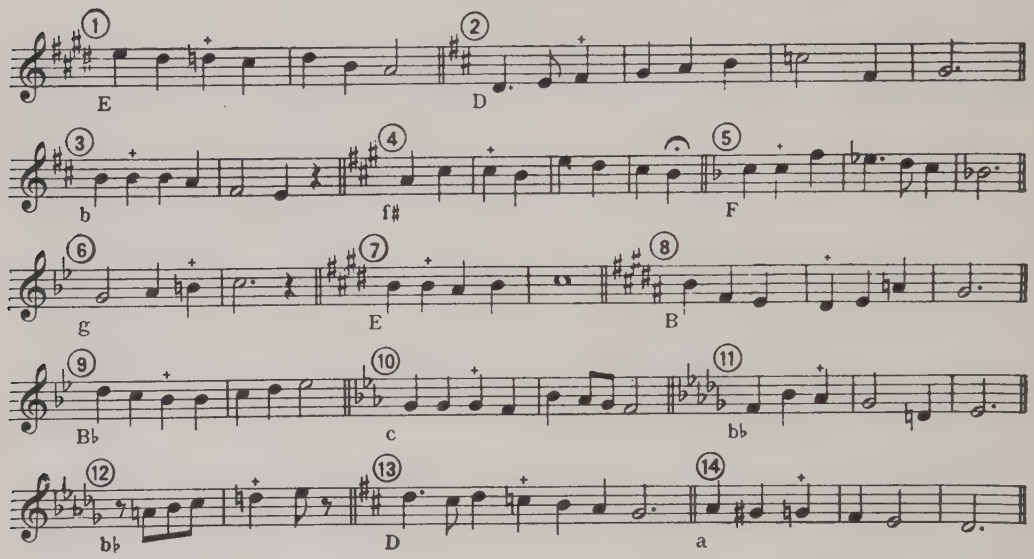


245. The illustrations of this lesson and the preceding show several chromatic melodies.

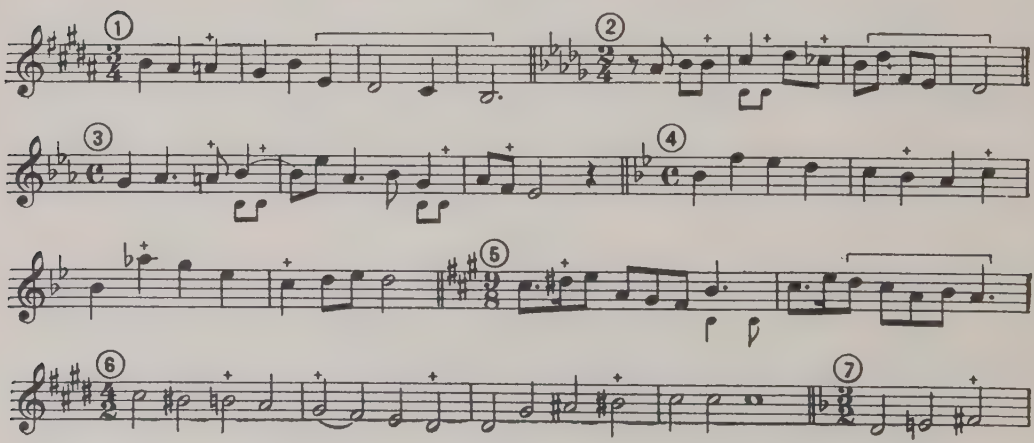
Ill. 176

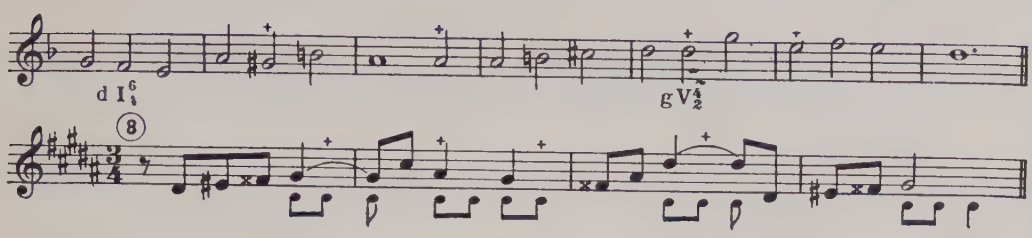


Exercise 110. The melodies all modulate to SD. Harmonize each to modulate once to the Maj. SD and the second time to Min. SD, in the latter making any necessary chromatic change in the given melody. As these are only fragments, the final chord may be I or I_6.



Exercise 111. The following melodies begin and end in the keys of the signatures. In their course they pass through Dm. or SD or both. The Dom. harmony is required by each + and a cadence modulation (Par. 236) by ⌜⌝.





LESSON 74

Secondary Triads

246. The secondary triads will be more easily understood if each is considered a substitute, an alternate, of a particular principal triad. That is, a melody pattern admitting of principal triads may lend itself to a harmonization consisting of one or more of the secondary triads.

In this capacity: II is the Substitute or Alternate of IV.
VI " " " " " " I.
III " " " " " " V.

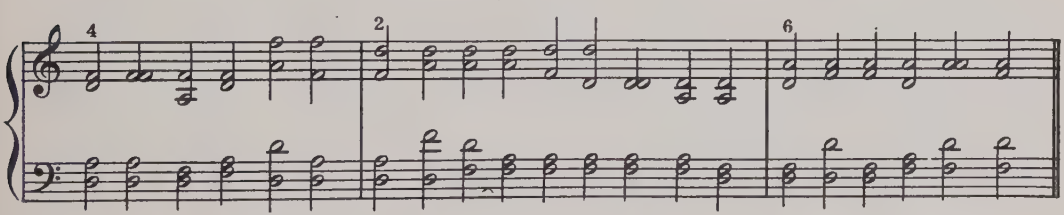
This detail will be developed in the succeeding lessons.

Supertonic Triad and Inversions

247. In a major key II is a minor triad.
In a minor key II° is a dim. triad.
In a maj. key it is the most important of the secondary triads and is possibly more useful than its own principal triad IV.
In the minor, II is less useful than IV.
It sounds best when harmonizing scale degrees 4 or 2. In certain patterns (Ill. 180), it harmonizes 6.

248. Either the 3rd or root may be doubled. In general, the doubled 3rd is best—especially in a minor key.
The root may not be tripled nor the 5th omitted.
The root or 3rd may be in the bass. The $\frac{6}{4}$ position is of rare occurrence and less satisfactory than the other $\frac{6}{4}$s.

Ill. 177



249. II is best preceded by IV or I.
V–II is possible in groups V–II–V or V–II–I. (Compare Par. 117.)
II most naturally moves into V or V_7 (or inversions).
II–I is relatively weak unless I is inverted.
II–IV is not good except as shown in Ill. 183.
V_7–II will not be permitted for the present.

250. From I to II. (See Ill. 178.)

(a) If both are triads the Sop., Alto and Tenor move contrary to the bass (as in IV–V) or

(b) the 3rd of I may ascend to the 3rd of II, the other voices moving down, resulting in a doubled 3rd in II.

From II to I (Ill. 178 with the chords in each group reversed).

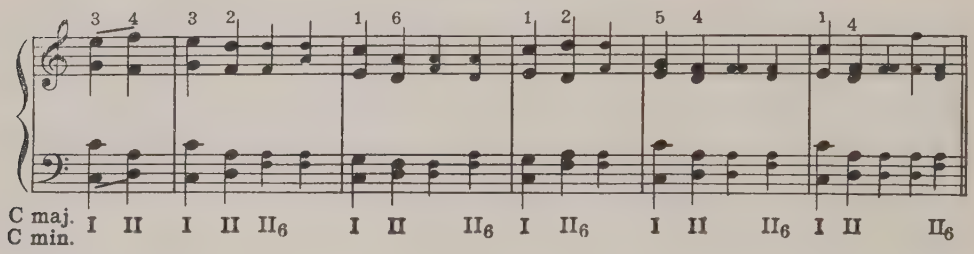
(a) If both are triads and the 3rd of II is doubled, one 3rd moves down to the 3rd of I, the other voices ascending.

(b) If the 3rd of II is not doubled, the upper three voices move contrary to the bass.

Review Lesson 37. Copy the illustrations, supplying first the signature of F major and again that of F minor. It will be noted that the voice-leadings of I–II and II–I are identical with those of IV–V and V–IV with an added variety of leadings resulting from the possibility of doubling the 3rd in II.
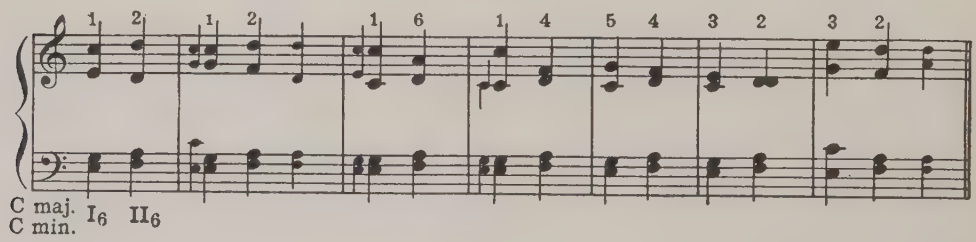
The following successions of I–II are all mechanically reversible as II–I but only measures 1, 2 and 3 have any musical value when so reversed. II–I is more satisfactory if either or both are 6th chords.

Ill. 178



251. I_6–II_6 and II_6–I_6 are serviceable progressions. Note below that either or both 3rds may be doubled in these successive 6th chords. Meas. 4 may not be reversed. All are good in the minor.

Ill. 179

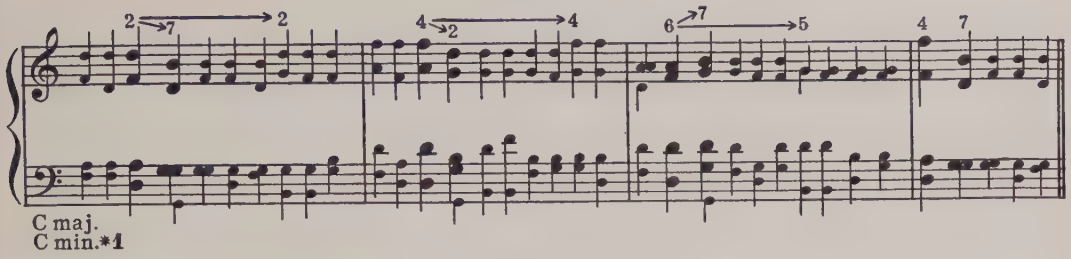


252. $II_{(6)}$–V harmonizes the patterns 2.7: 4.2: 4.7: 6.7 (compare this 6.7 with previous harmonizations).

$II_{(6)}$–V_6 or $II_{(6)}$–V_7 are also acceptable for the same patterns and in addition may be used with 2.2: 4.4: 6.5.

In general, the root or 3rd of II, if in the Sop., descends: the 5th in the Sop. ascends one degree.

Ill. 180



Used in minor these connections will require 6+ if it moves to 7.
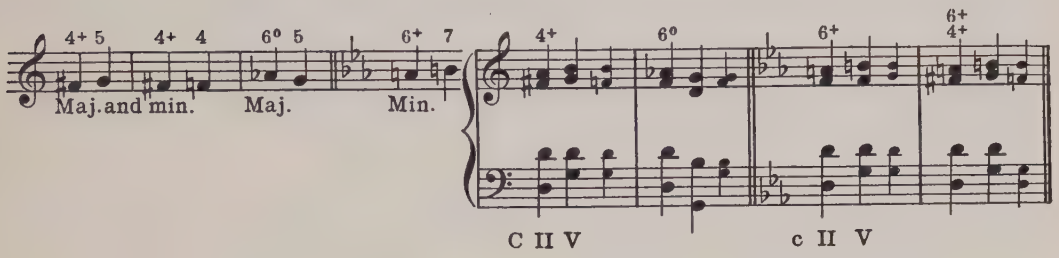
253. In II–$V_{(7)}$ the following alterations will be permitted:

Min. key—$6^{+}.7$ (necessary if 6 move to 7).

Min. and Maj.—$4^{+}.5$ and $5.4^{+}.4$. (See Par. 190.)

Maj.—$6^{\circ}.5$.

Ill. 181



254. The approach to the altered tone should form a good interval.

The altered tone should not be doubled.

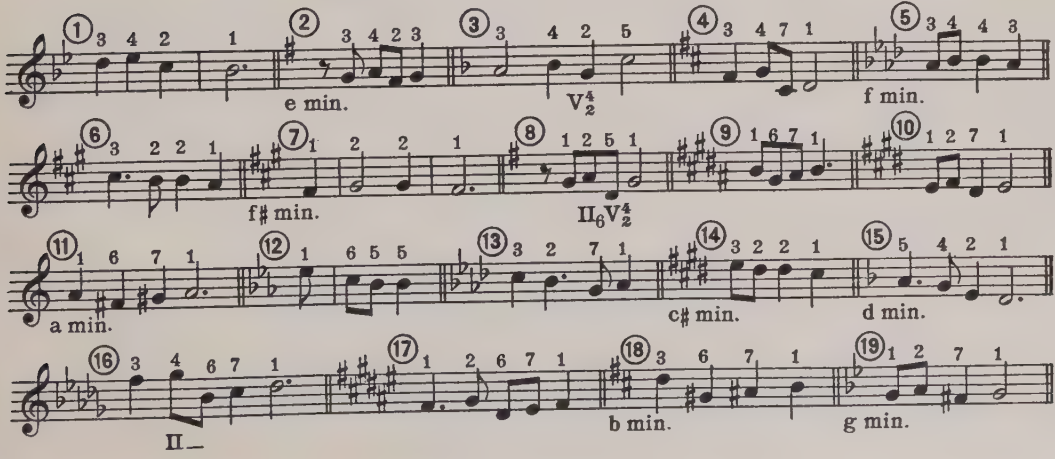
The best working plan is to write the chords II–$V_{(7)}$ *unaltered* and according to Par. 252. Then make the alterations where the voice leading permits and good judgment warrants. Extreme moderation is urged.

Exercise 112. The following fragments are the result of combining the patterns of I–II, II–$V_{(7)}$ and $V_{(7)}$–I.

Each is to be harmonized with the chords:

I—II—$V_{(7)}$—I

The first inversion of the triads and all inversions of V_7 are available. Refer constantly to the illustrations of this lesson.



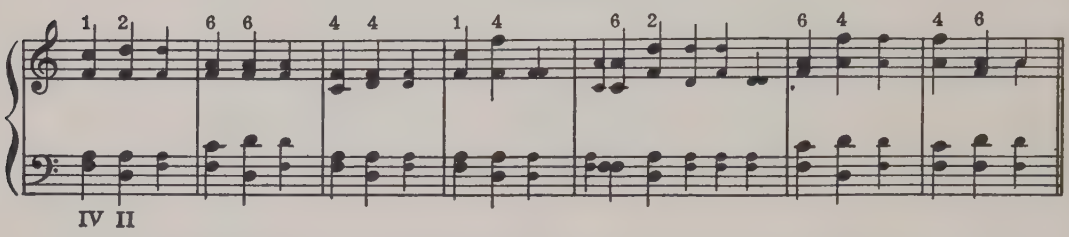
LESSON 75

II (Continued)

255. IV–II and IV–II_6 are satisfactory progressions, resulting in the melody patterns 1.2, 6.6, 4.4 and exceptionally as shown in the last four measures of Ill. 182.

All the following examples are possible in minor, except Meas. 5 which requires the descending pattern 6.2 to be acceptable. Why?

Ill. 182



256. The following illustrates the few acceptable uses of II–IV.
The melody pattern (found in both major and minor) is:

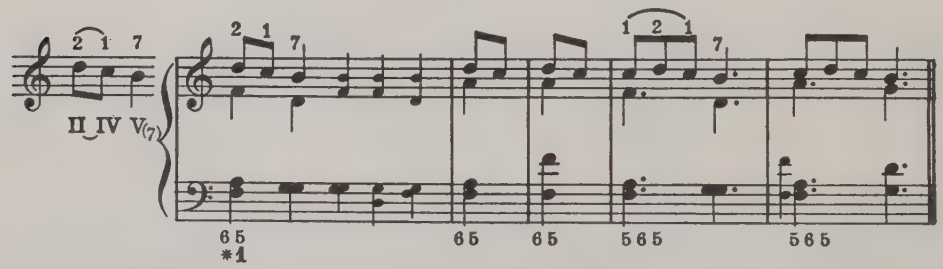
(a) 2 1 7 — II_6 IV $V_{(7)}$ or (b) 1 2 1 7 — IV II_6 IV $V_{(7)}$

The patterns occupy one beat or one division of a compound measure. Pattern (a) is called a *Couplet.*

Note that only the Sop. moves during the II_6–IV or IV–II_6–IV. The other voices remain stationary.

The moving tone of the first chord may not be doubled.

Ill. 183

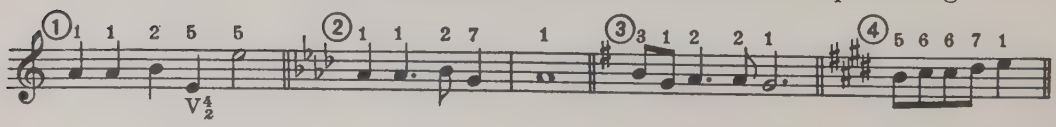


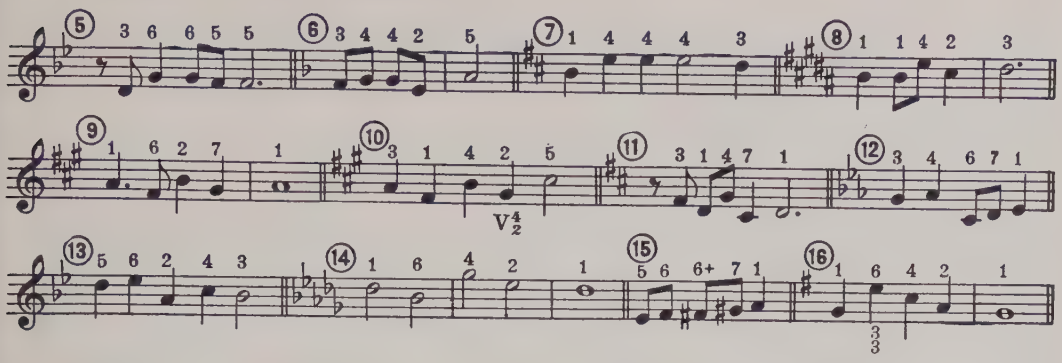
*1 The figuration 6 5, 5 6 5, is that used with a given bass, requiring that some one voice sings the indicated tones.

Exercise 113. Harmonize the following fragments with the chords:

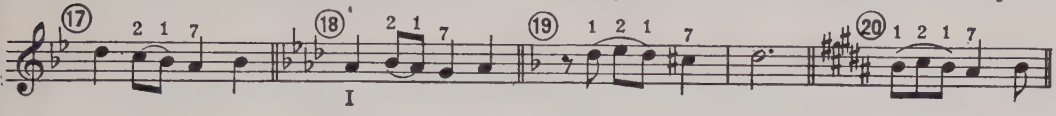
I–IV–II–$V_{(7)}$–I

The bass positions may be selected from the variety shown in the illustrations of this lesson and the preceding.





The following are patterned after Ill. 183. Harmonize accordingly.
Transpose each fragment to two other keys and harmonize in those keys.



LESSON 76
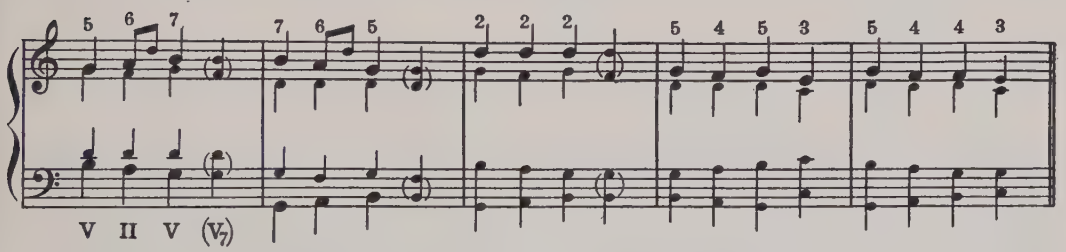
II_4^6

257. II may be used as a Diatonic $\frac{6}{4}$ in the chord groups:

$V_6 - II_4^6 \begin{matrix} \nearrow V \\ \searrow V_7 \end{matrix}$ $\qquad$ $V - II_4^6 \begin{matrix} \nearrow V_6 \\ \searrow V_5^6 \end{matrix}$

The melody patterns are as indicated in the illustration:

Ill. 184



Compare these groups with those of Ill. 118. II_4^6 is substituted for IV^6.
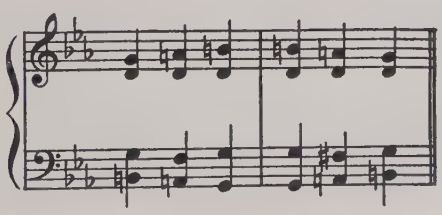
Also compare with Ill. 149. If the signature of F is supplied in Ill. 149 the groups become acceptable as $V–II_4^6–V$ while a signature of G supplied to the above makes the chords $I–V_4^6–I$.

Analyse the voice leading: the bass and one other part sing the same tones in reverse order while another part repeats scale-step 2.

In maj. the alteration of 4 (4+) is applicable to this illustration.

To be acceptable in the minor these groups require the chromatic alterations explained in Par. 253.
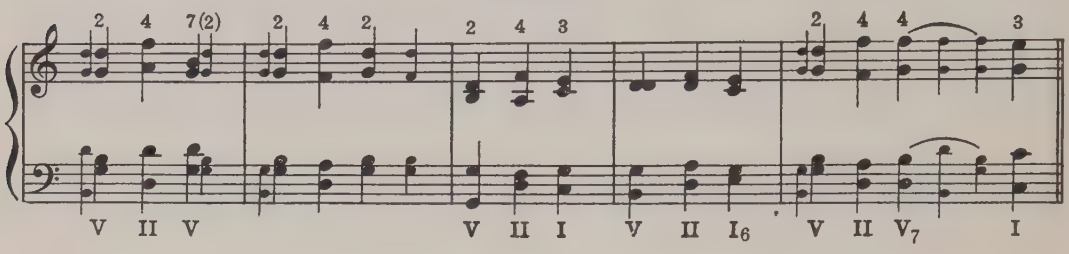
Ill. 185



258. V–II and V–II_6 have the same application and value as the V-IV of Ill. 117. Besides being useful in the following patterns V–$II_{(6)}$–V may harmonize the patterns of Ill. 184.

In minor the usual alteration of step 6 must be made in moving to 7.

Ill. 186



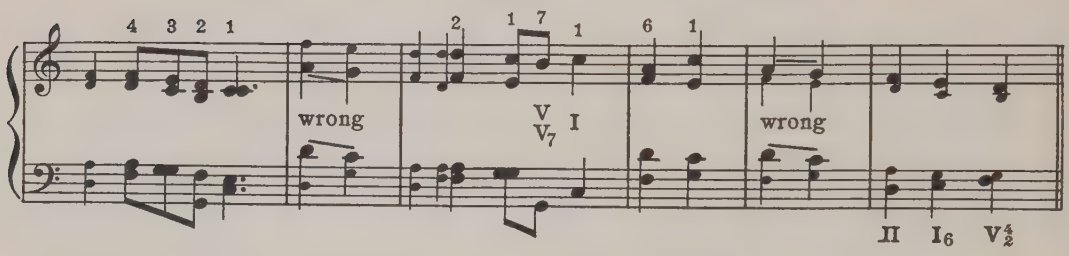
259. The most important use of II is to substitute for IV in the cadence II–I^6_4–V_7–I.

Compare Ill. 142 with the one below.

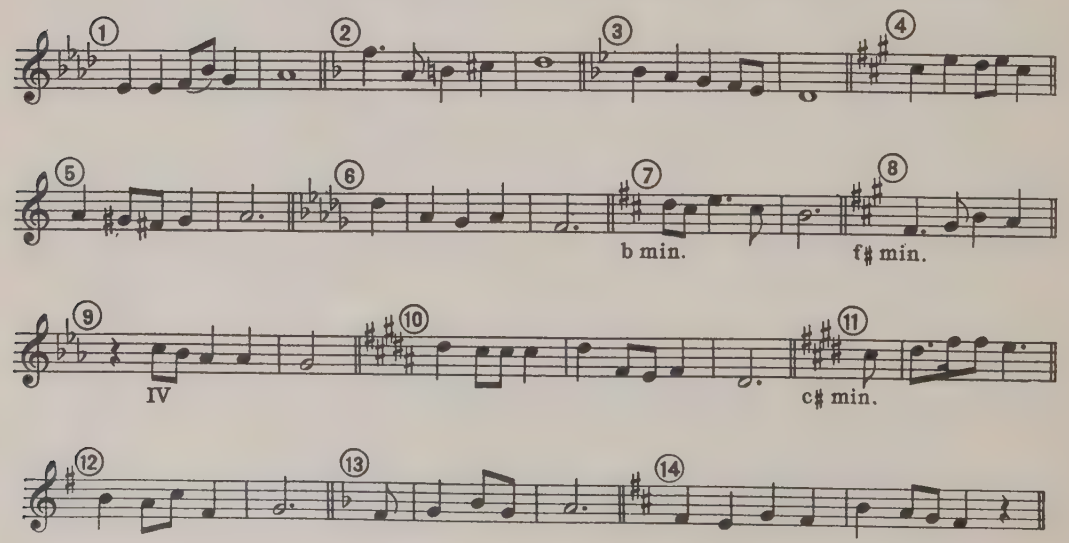
The melody patterns suggesting II in this capacity are:

4.3.2.1 and 2.1.7.1.

Ill. 187

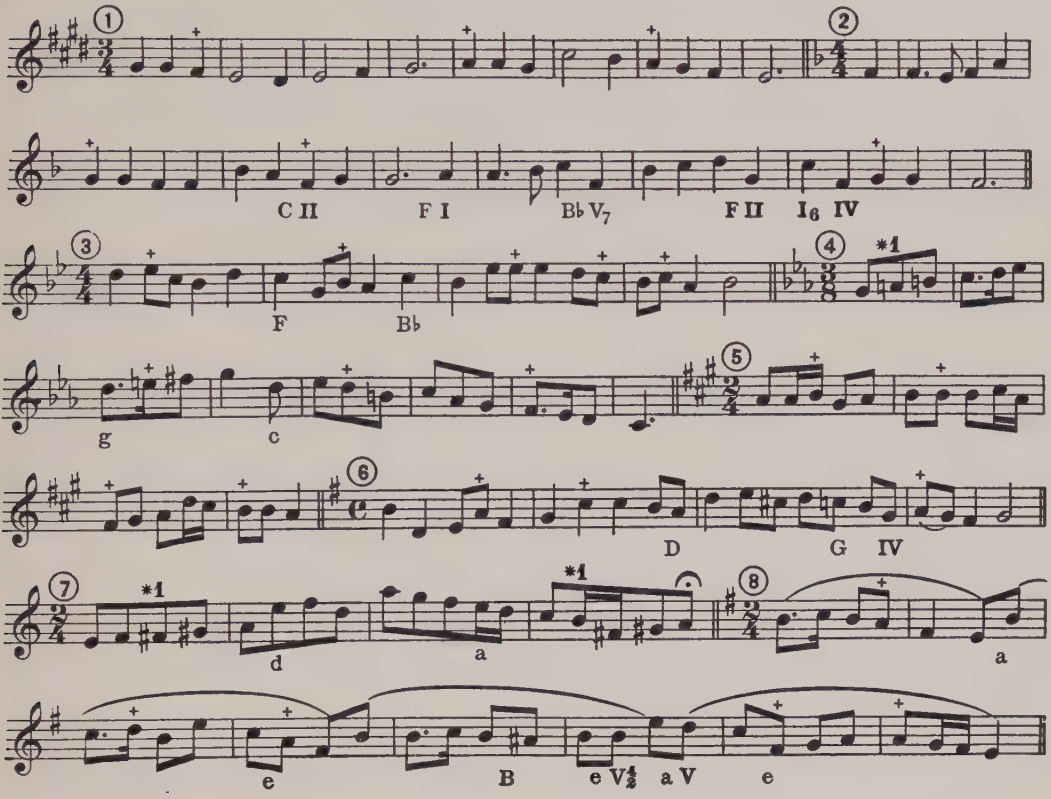


Exercise 114. Harmonize with the groups of this lesson. Ill. 187 (II in the cadence) will not be applied until the next exercise.

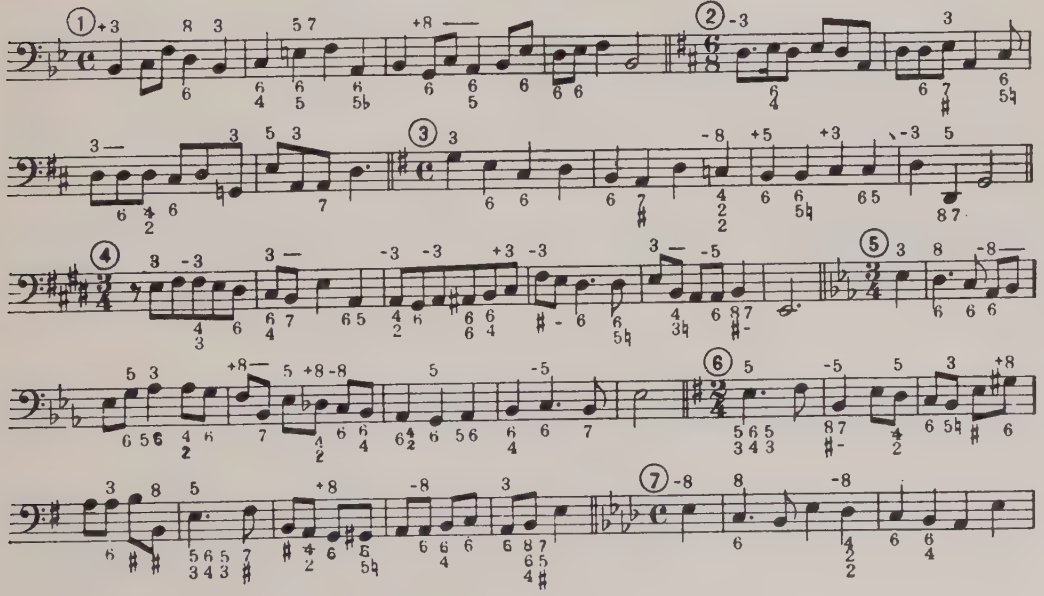


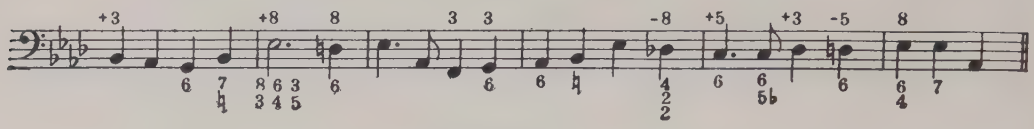
Exercise 115. Harmonize, using II at places marked +.

*1 The altered forms of II shown in Ill. 181 should be used here and may be used elsewhere.



Exercise 116. Review preceding lessons on "Given Bass" for meaning of figures.





LESSON 77

VI

260. VI is the alternate of I.

As a triad, the 3rd or 5th—seldom the root—is in the Soprano.

As 6th chord, the root or 3rd, less often the 5th, is in the Sop.

The root or 3rd is doubled. No interval may be omitted.

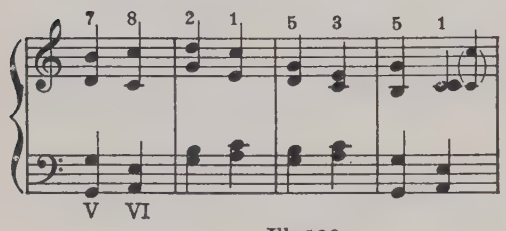
Its greatest usefulness is in substituting for I in such conventional progressions as:

I–I	$V_{(7)}$–I	I–IV	I–II
I–VI	$V_{(7)}$–VI	VI–IV	VI–II

261. In the following V–VI and V_7–VI groups, note that in every instance the 3rd of VI is doubled. This results from the ascending progression of the leading-tone.

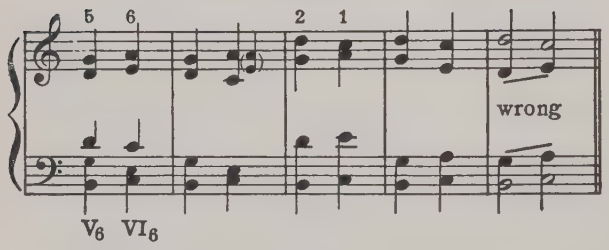
As the ear expects $V_{(7)}$ to move into I, $V_{(7)}$–VI is called a *Deceptive Cadence.*

Ill. 188



Compare these with Ill. 178.
All are reversible:
All are possible in the minor.

Ill. 189



All are reversible and acceptable in minor.

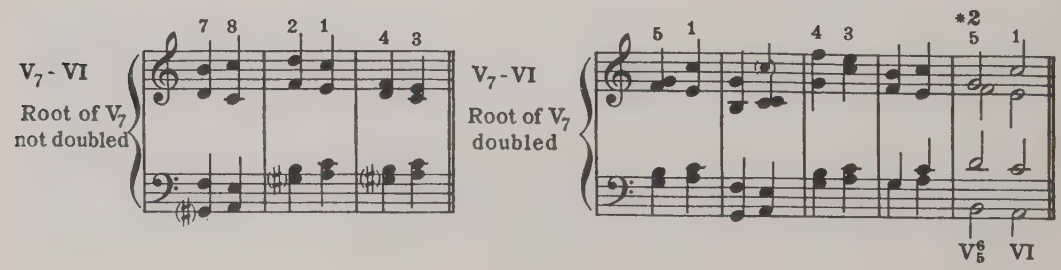
Compare with Ill. 116.

If Ill. 116 is given the signature of B♭ the last four measures become acceptable as V–VI.

262. The tones of V_7 move into VI exactly as into I except that the root either ascends to the root of VI or skips to the 3rd of VI. If the root of V_7 is doubled, one moves to the root, the other to the 3rd of VI.

Play the following in both maj. and minor: also reverse the chord successions.

Ill. 190
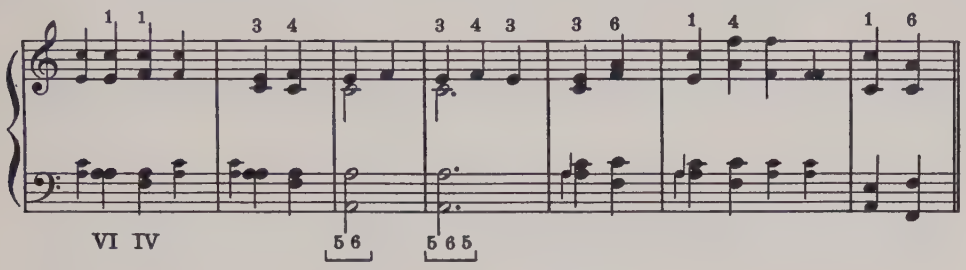


*1 *In V_7–VI of major key, the root of the V_7 may be chromatically raised, making the progression sound VII°_7–I of the Relative Minor.*

*2 It is quite exceptional for an inverted V_7 to progress to VI. V^6_5–VI is possible with the melody pattern 5 . 1. The consecutive 5ths are passable.

263. VI–IV is a much used succession, good in both major and minor, substituting for I–IV.

Give Ill. 182 the signature of A (again of A minor). The result is a series of acceptable VI–IV groups.

Ill. 191



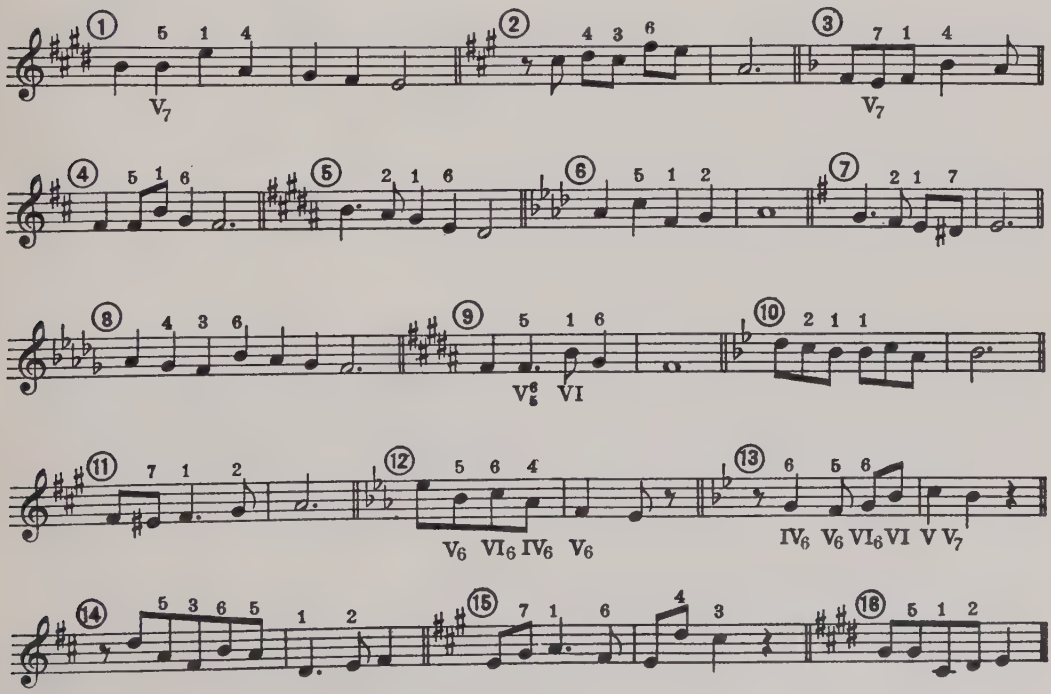
The rule in *italics* of Par. 256 applies to meas. 3 and 4.

264. Give Ill. 191 the signature of A maj. and again of A min. The groups become:

I–VI, harmonizing 3.3: 5.6: 5.6.5: 5.1: 3.6: 3.1.

These will not be used until the next lesson.

Exercise 117. Harmonize the fragments: where the melody-notes are numbered, combined chord-groups of the lesson are to be used: V–VI–IV; V–VI–V, etc.
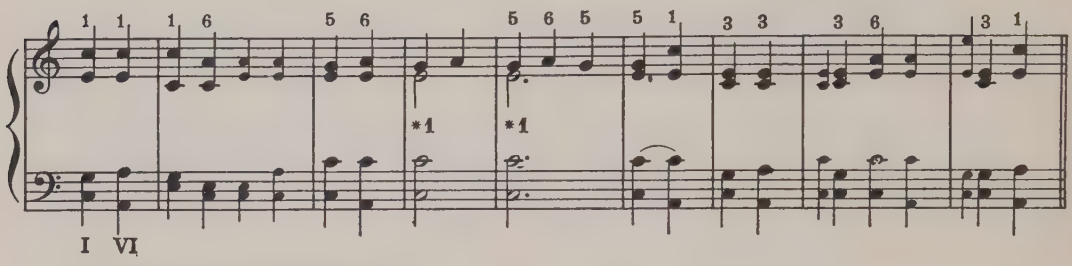


LESSON 78

VI (Continued)

265. I–VI is a satisfactory progression, while its reverse VI–I is best avoided. A secondary triad does not tend to move into its own principal triad.

Ill. 192



*1 Refer to Par. 256 and 264.

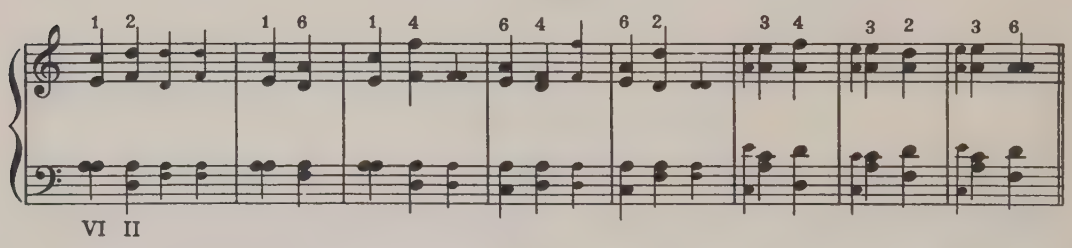
All the groups are good in the minor but *not* reversible.

266. VI moves into II as readily as into IV.

While the chords in the groups below will reverse, few of them are satisfactory. Meas. 4, 6 and 7 are the best.

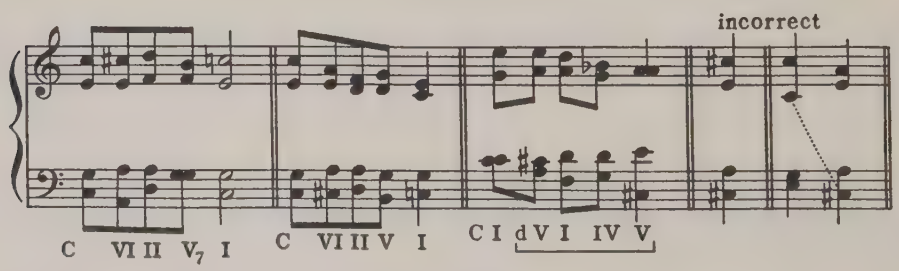
In the minor, II sounds best as a 6th chord or, if in triad position, with the 3rd doubled. Consider this in applying the following groups to the harmonization of a minor melody.

Ill. 193



267. In VI–II of a major key, the 3rd of VI may be chromatically raised provided it ascends a half-step to the root of II. This results in a succession sounding V–I of the supertonic minor key, but if no further chords of that key corroborate it, the group remains VI–II.

Ill. 194



Recall the general rules covering chromatic alterations:
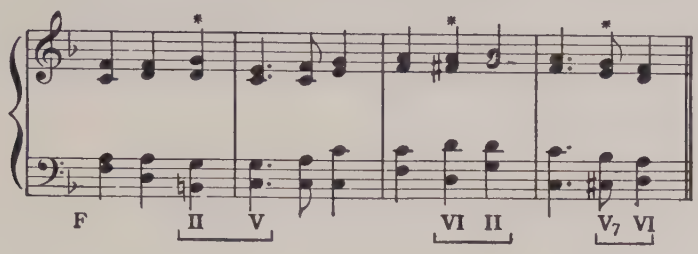
(a) The altered tone may not be doubled.

(b) A scale-tone and its alteration, occurring in successive chords, must be in one and the same voice.
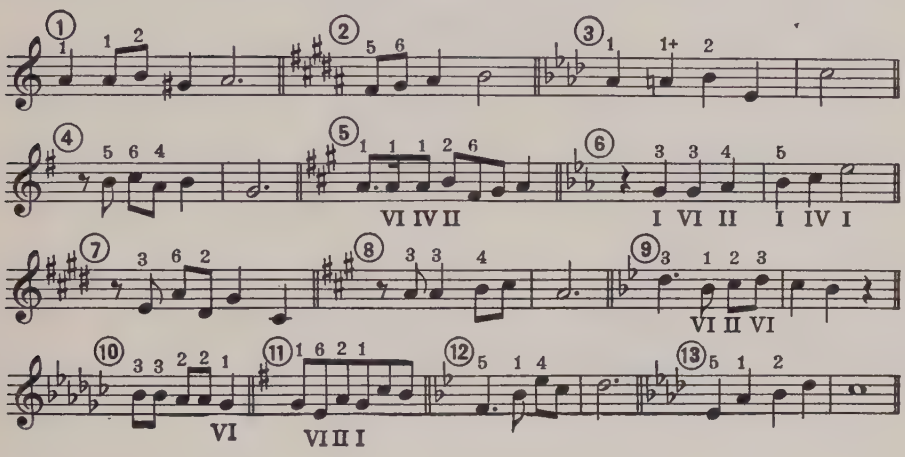
In Ill. 193 any voice singing the tones C–D may take C♯–D.

The following harmonization of a fragment of "America" illustrates the raised 3rd in II, the raised 3rd in VI and the raised root in V_7.

Ill. 195



Exercise 118. Apply the patterns of the lesson to those places where the melody-notes are numbered.

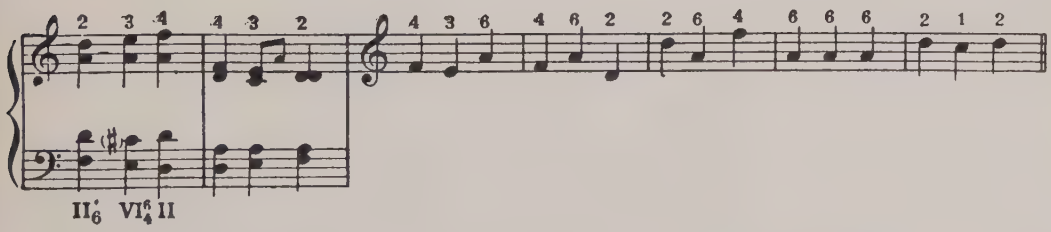


LESSON 79

VI^6_4

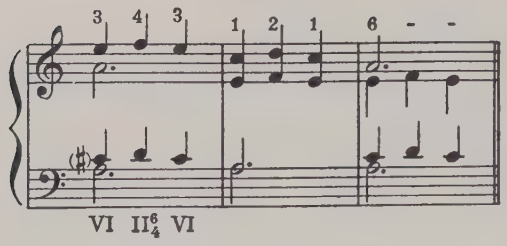
268. VI^6_4 is acceptable in the Diatonic group, preceded and followed by II or II_6. The groups containing it correspond to those of Ill. 149 and 150; the same melodic contour and voice-leadings result with, of course, different scale numbers.

Ill. 196



269. In connection with VI, II becomes possible as an Embellishing and Suspension $^6_4$, governed by the same general melodic conditions that affect the second inversion of the chords already explained. (See Lessons 65 and 68.)

Ill. 197



Embellishing $^6_4$: VI–II$^6_4$–VI.

Not especially good in minor.
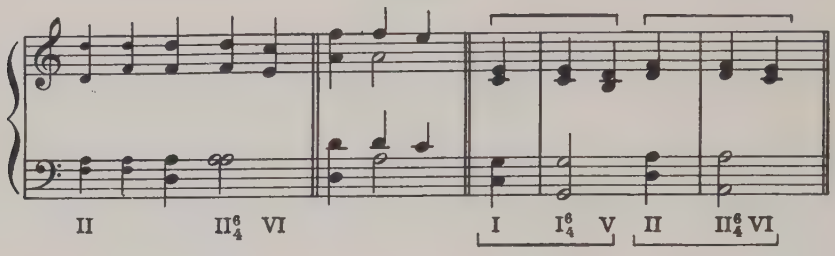
The 3rd of VI in this illustration and in Ill. 196 and 198, may be raised chromatically. (See Par. 267.)

Suspension: II$_{(6)}$–II$^6_4$–VI.

These groups are rarely used except when preceded by a stronger group of the same type (Sequence).

They are not good in minor.

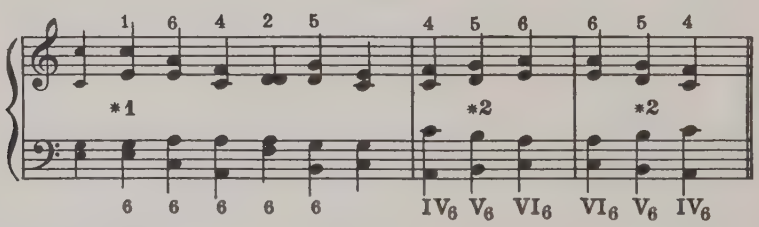
Ill. 198



270. The following are uses of VI in a series of 6th chords:

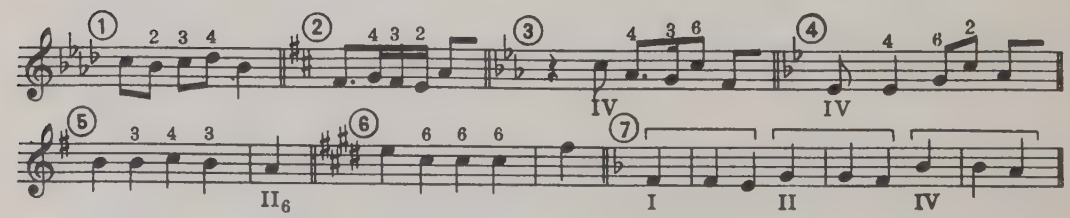
*In successive 6th chords the Sop. usually sings the roots of each. If the bass is diatonic, one and the same inner part takes the 5th of each chord. If the bass skips, as in *1, the doubling and movement of the inner parts is governed by the need of smooth leading.*
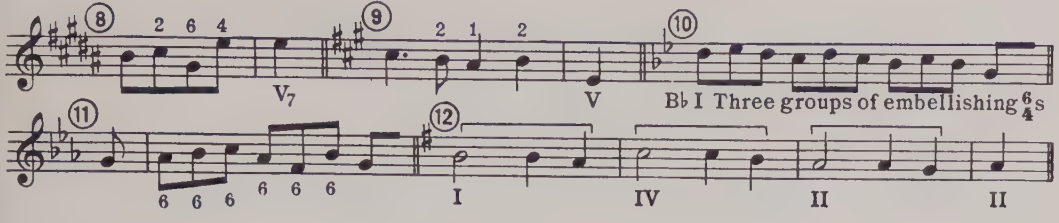
Ill. 199



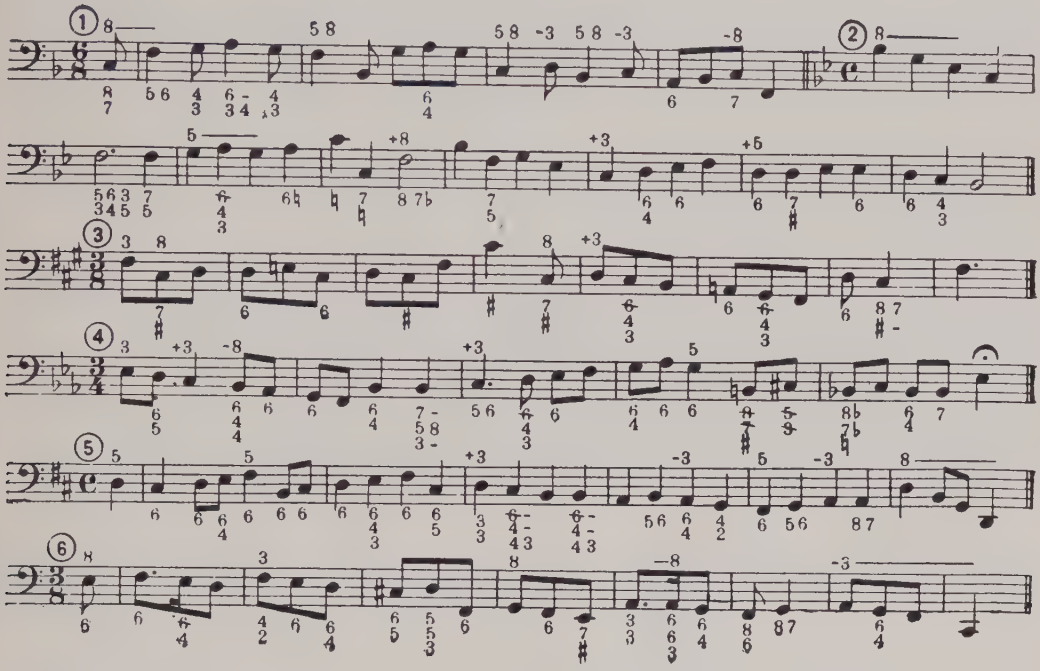
*2 The doubled leading-tone is correct because the two tones (B) are approached and quitted in contrary motion and diatonically.

Exercise 119. Harmonize the fragments with lesson-groups. Add several chords at the end of each fragment, forming a satisfactory ending.





Exercise 120. Basses applying the various uses of VI.



LESSON 80

Transient Modulations

271. Modulations are *Transient* or *Positive*:—

Transient, if a key is just passed through on the way to another or when a return to the original key is immediately made.

Positive, if the new key is clearly defined by a strong cadence or any other group of characteristic chords.

The alterations of II, VI and V_7, already explained, are transient modulations, so vague as hardly to need a designation of key change.

272. Transient modulations, made in the course of a phrase which is to end in its own key, are more often through the keys SD, ST and SM.

These keys have for their I the IV, II or VI of the original key—chords which, without further modulation, connect with characteristic chords of their key.

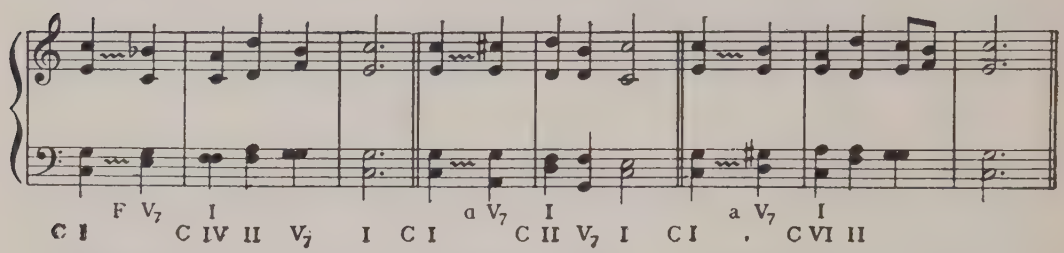
273. Modulations made with the idea of gradually approaching a definite phrase-ending key may be made through SD, ST or SM of this key.

A minor key has no ST as II° is a dim. triad. So only SD and SM are available for the purposes just explained.

274. The following illustrates Par. 272. Note the double designation given the third chord of each group.

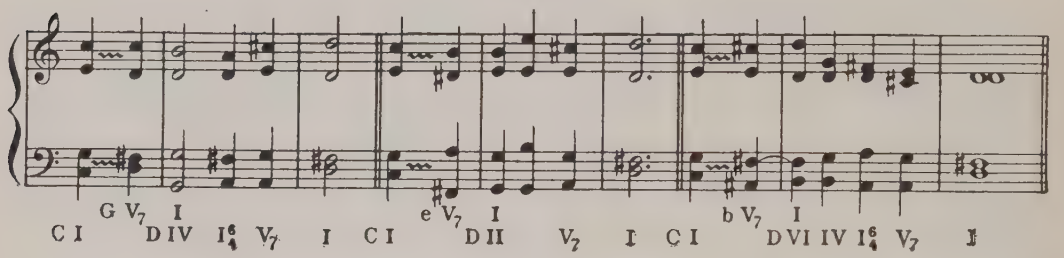
The ∿∿ implies that other chords have intervened.

Ill. 200

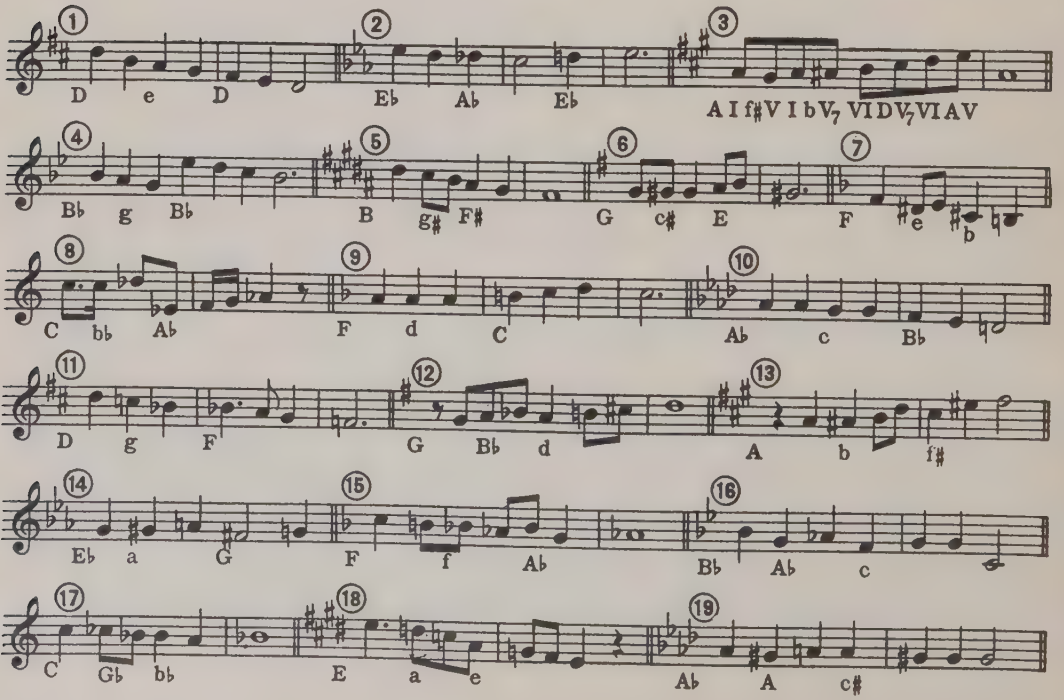


275. The following illustrates Par. 273. A modulation is made to SD, ST or SM of the final key, D major. The I of the intermediate key is then designated IV, II or VI of D and the remaining chords corroborate D.

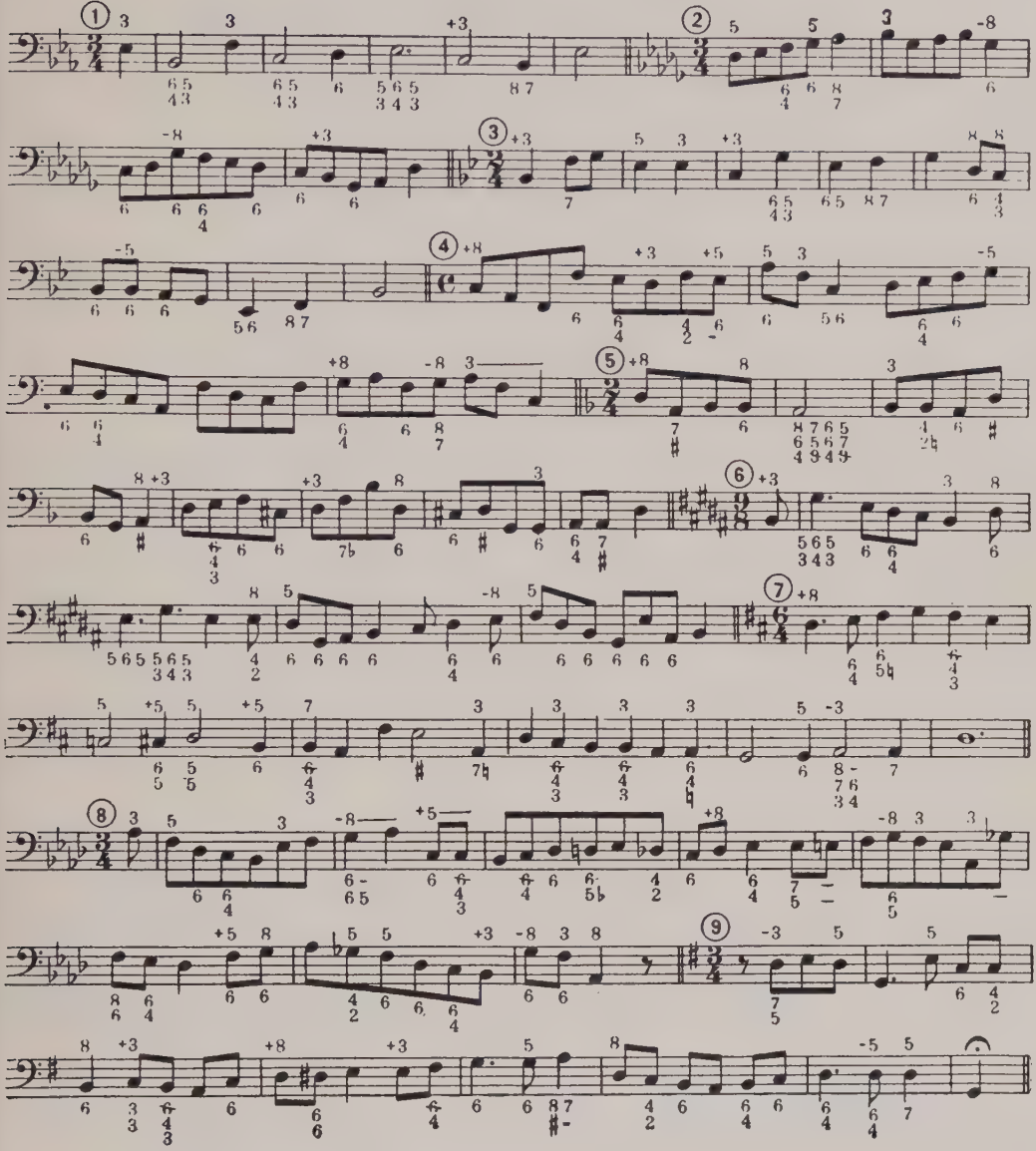
Ill. 201



Exercise 121. Each fragment passes through SD, ST or SM of the final key, using V_7–I (in any available positions) of the intermediate key. The I of this key becomes IV, II or VI of the final key. Original modulations should supplement the given ones.



Exercise 122. Given basses illustrating the use of VI and containing modulations to SD, ST and SM.



LESSON 81

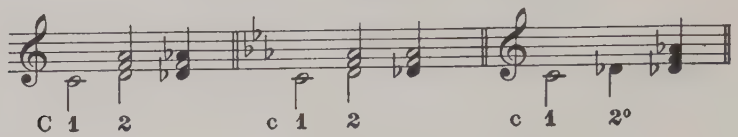
Neapolitan 6th

276. A distinctive chord in both major and minor is the so-called Neapolitan 6th, labeled N6.

It results in { major from lowering the root and fifth / minor from lowering the root } of II.

Broadly analysed, it is a major triad built on 2°. It is equivalent to I of ST°.

Ill. 202



277. It usually appears as a 6th chord, though the triad and $\frac{6}{4}$ positions are acceptable. As a $\frac{6}{4}$ the bass must be approached and quitted without a skip.

It is followed by I^6_4 or some form of the dom. harmony.

It may be preceded by any triad, the dominant being the least good and best avoided.

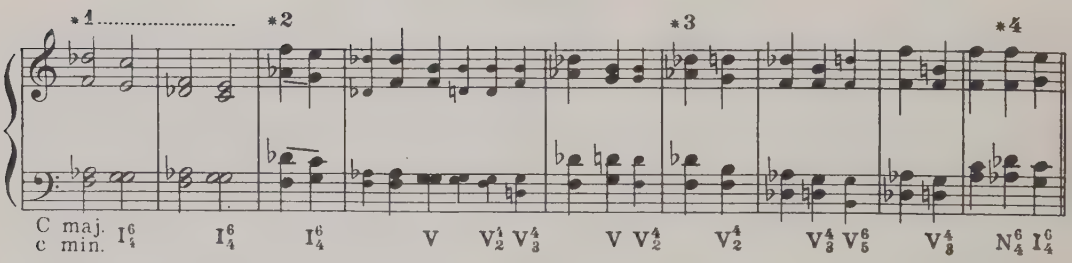
Its chief use is in cadences and modulations.

A peculiarity is that, though an altered chord, it is not dissonant; therefore the rules forbidding the doubling of altered tones and requiring them to resolve diatonically are not strictly enforced.

278. N6 preceding I^6_4 should have—3rd in bass.
3rd or root in Sop.
3rd doubled.
The Sop., Alto and Tenor descend one degree.

N6 preceding $V_{(7)}$ may have—3rd or root in bass. $\frac{6}{4}$ rare.
root or 3rd in Sop.
3rd or root doubled.
The root ascends chromatically 2°–2, or descends to step 7. 5th descends a degree.
3rd is either retained, ascends one degree or descends to an acceptable tone of $V_{(7)}$.

Ill. 203

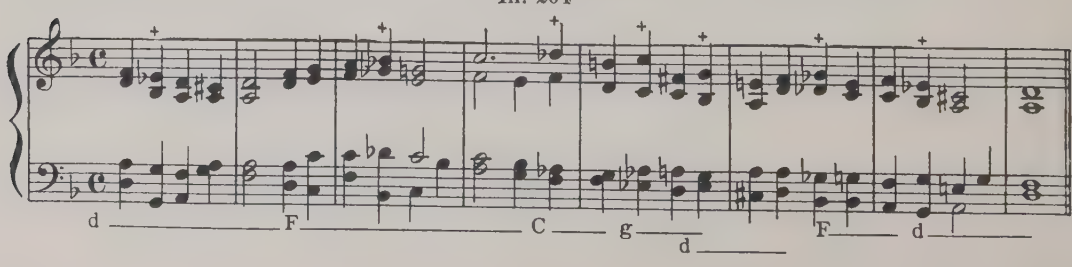


*1 These are the more usual shapes and progressions.
*2 The consecutives, moving a half-step, while not wrong, are best avoided.
*3 The ascending chromatic degree in the Sop. is good only in the melody 1. 2°. 2.
*4 The successive $\frac{6}{4}$s are acceptable.

The possibilities of this chord in minor will be evident if a signature of three flats and a ♮ before every B is given Ill. 203.

Analyse the following for uses of N6, particularly in modulation.

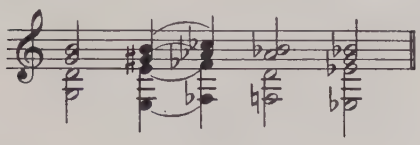
Ill. 204
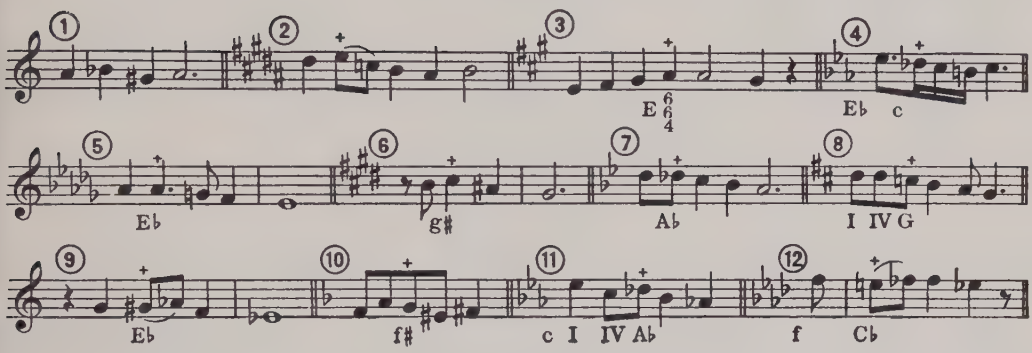


Exercise 123. Harmonize the fragments. Remember that they are only fragments and admit of some freedom in selection of the first and last chords and positions.

Use N6 at each +.

The difficulty of thinking and writing unusual notations, such as  and also of connecting them with previous chords is eliminated if the enharmonic form is written first and then tied into the proper notation. (See Melodies 9 and 12 below.)





LESSON 82

N6 as a Related Key

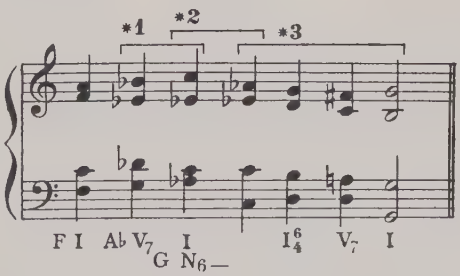
279. Just as the various triads of a key can be recognized as tonic triads of other keys, the N6 can be considered as a related key and a direct modulation made to it. Also, an approach to any key might be made through the key represented by the N6 of the new tonality.

For instance: from F to G.
N6 of G is A♭–C–E♭ which is I of A♭.
The modulation is:

FI–A♭V_7–I

GN6–(I^6_4)–V_7–I

Ill. 205



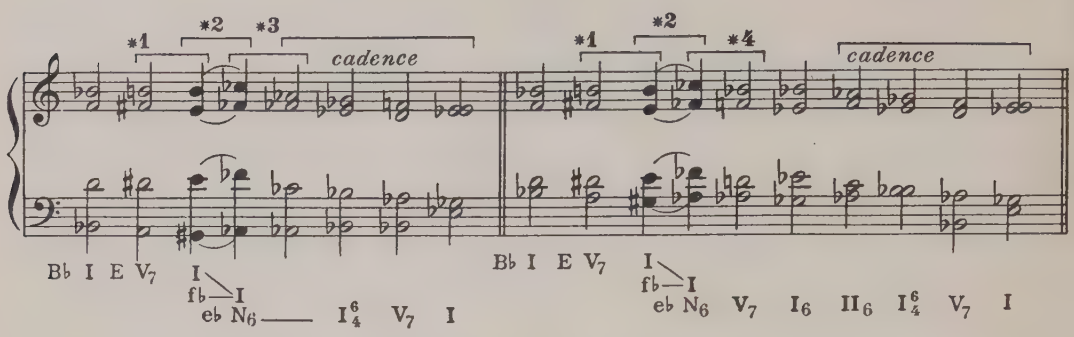
In Ill. 205. *1—is the mod. to N6 of G. *2—the N6 changes shape to move satisfactorily into I^6_4 of G. *3—is a cadence in G.

Or—from B♭ to e♭ minor (Ill. 206).

N6 of e♭ minor is F♭–A♭–C♭. This proves to be an awkward tonic so its enharmonic form, E–G♯–B, may be used.

Write B♭ I–EV_7–I–e♭N6–(I^6_4)–V_7–I.

Ill. 206



Ill. 206 shows the same modulation with different endings.

*1—is the modulation V^7–I of E (the enharmonic form of F♭), the latter being the N6 of the final key e♭.

*2—changes E I enharmonically into the F♭ triad.

*3—changes the shape of the N6 so that it can move into e♭ I^6_4.

*4—N6 moves into V^4_2 which has to resolve to I_6. This latter being an unsatisfactory final chord, a full cadence is added.

Exercise 124. Follow the plan of Ex. 107 and write modulations patterned after those of this lesson.

LESSON 83

N6 (Continued)

280. With slight effort and experimentation it is possible to move from any maj. key I (and some minor Is) into any N6 with good musical effect. As a problem in triad connection this will now be required. Work as follows:

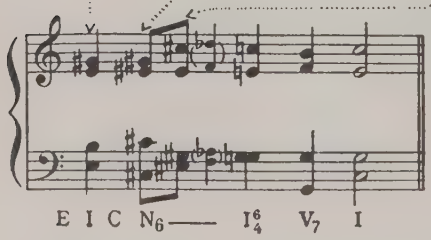
Write I of first key, root (sometimes 3rd) in bass.

Think N6 of new key—a maj. triad on 2°. Think it in the most convenient notation—one that will connect best with the preceding.

Write it in a position dictated by the laws of progression or, if there is any choice, in a position admitting of a descending diatonic or chromatic sop.

If this position is not that of a 6th chord with root or 3rd in sop. (3rd usually doubled), follow it with such a position.

Ill. 207
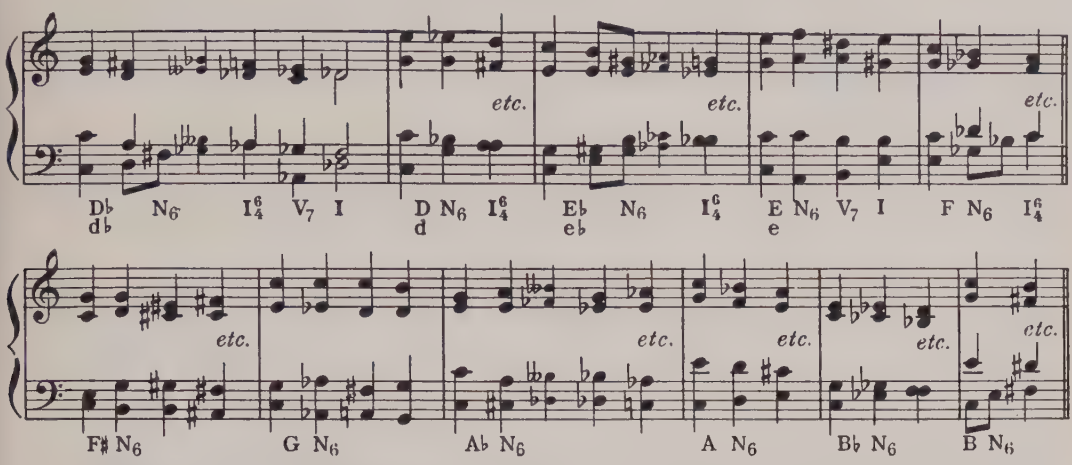


Move directly into I^6_4–V_7–I or, omitting the I^6_4, into V_7–I.

The correct notation of the N6 may follow the enharmonic form, simply to insure correct voice-leading. This is shown in small notes in the illustration.

281. The connections of I of C with every N6 are herewith shown. In some, problems have been deliberately created. Other connections are possible and equally good. Some N6's have been led into I^6_4 and others into V_7; either is

possible in every instance. In case the last chord is an inverted I, an added cadence $\left.\begin{matrix}\text{II}\\\text{IV}\end{matrix}\right\}$ I_4^6–V_7–I is necessary. The new key may be major or minor.

Ill. 208



Exercise 125. Following the plan of Ex. 107, write a series of modulations after the directions of this lesson.

LESSON 84

Mediant Triad

282. III is the least used of the secondary triads. While it has the same relationship to V that II has to IV and VI has to I, an application of this relationship is less practical and satisfactory. It serves distinctively in certain patterns but, in general, it is noteworthy by its infrequency of appearance.

In major, III is a minor triad; in minor it is an aug. triad, but the necessity of using the descending form of the melodic minor occasionally changes it to a major triad.

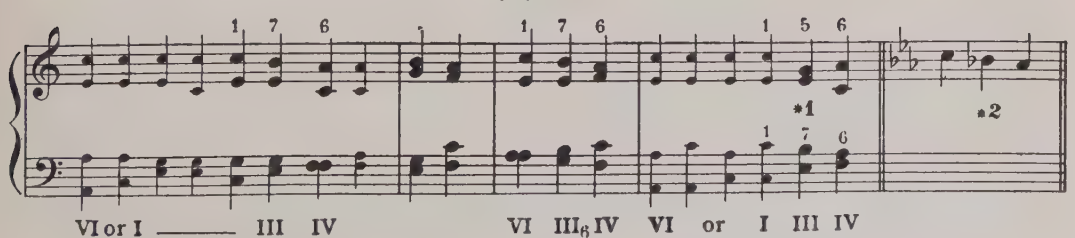
As a triad, the root or 3rd is doubled. As a 6th chord any note may be doubled. The 5th of this chord is the leading-tone but it loses its character as such when sounded in III.

283. In the pattern 1.7.6, the leading-tone is not satisfactorily harmonized with V (exceptions in Ill. 118 and 119). III is the substitute, acting as a passing-chord in the groups

I–III–IV and VI–III–IV.

In III–IV, if both are triads, the Sop., Alto and Tenor must move contrary to the bass (as in IV–V) or the 3rd of III may ascend to the 3rd of IV, doubling the 3rd of IV (as in V–VI).

Ill. 209



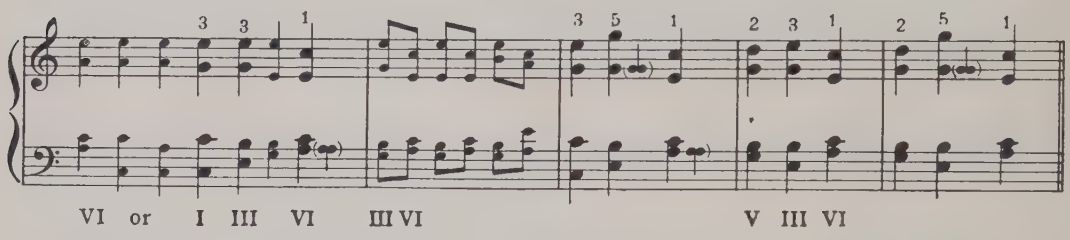
*1 An alternate melody pattern is 1.5.6, the 1.7.6 occurring in the alto or tenor.
*2 In minor, step 7 is lowered to conform with the melodic scale pattern.

284. In the following groups, III is actually a substitute for V, preceding VI in the groups

I–III–VI: VI–III–VI: V–III–VI.

In minor, the III remains an aug. triad; the leading-tone ascends regularly, and the 3rd of VI, of necessity, is doubled. Place the signature of C minor before the following, supply the ♮ before each B and point out the successions that are not good in minor.

Ill. 210
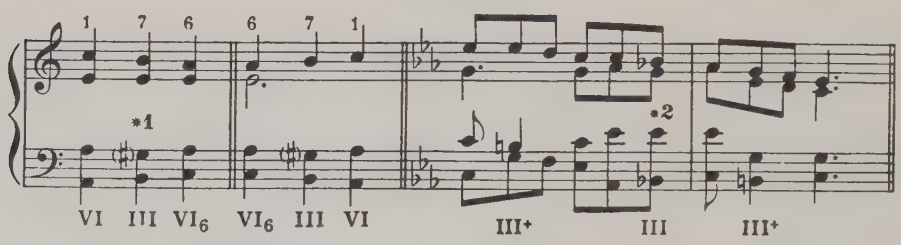


285. III may occur as a Diatonic $\frac{6}{4}$ in the groups VI–III$^{6}_{4}$–VI$_{6}$ and VI$_{6}$–III$^{6}_{4}$–VI. It may not be used as a Suspension or Embellishing $\frac{6}{4}$.

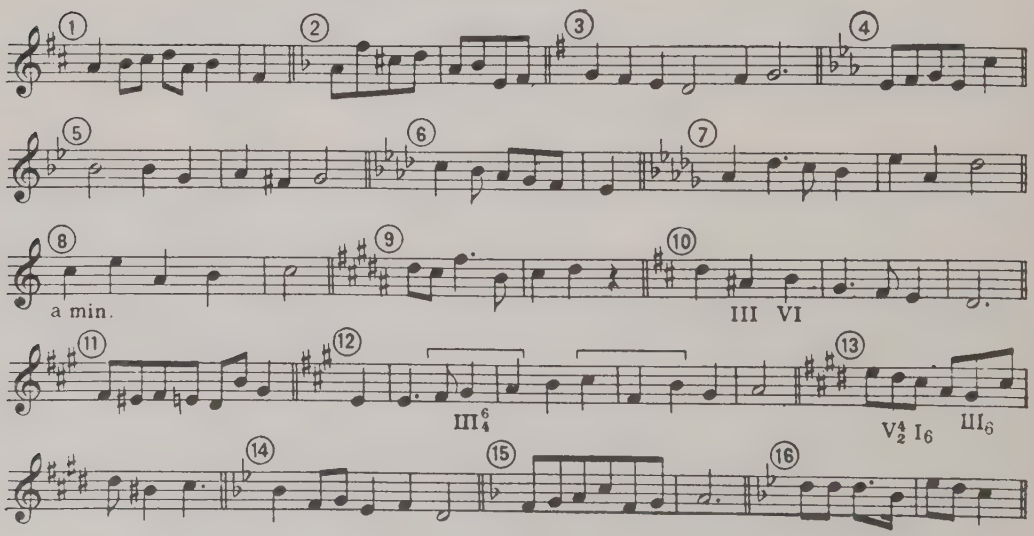
In major, the 3rd of III may be raised, making the group correspond to I–V$^{6}_{4}$–I of the relative minor. (*1 below.)

In minor, scale-step 7 will have to be lowered. (*2.)

Ill. 211



Exercise 126. Number the scale-steps and find patterns admitting of III. Harmonize accordingly.



LESSON 85
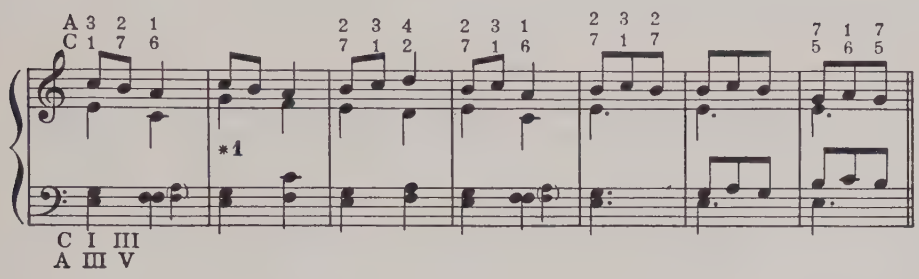
III (Continued)

286. The following illustrates the possibilities of III in the harmonization of a couplet or triplet (two or three tones to a single beat or one division of a compound measure).

The illustration should be considered as being in C major, A major and A minor. Supply the necessary signature for A maj. and the g♯ for A minor. All groups are equally good in the three keys except *1 and with the condition that g♯ in A minor ascends one degree.

The tones of the couplet and triplet may not be doubled.
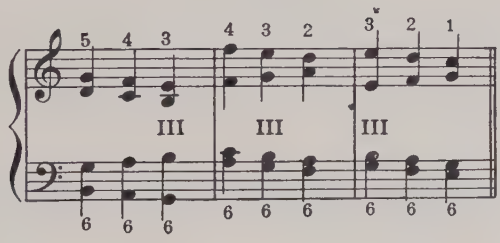
Ill. 212



287. III takes its place in a line of successive 6ths, the voice-leading complying with Par. 270.

The following is possible in minor if scale-step 6 conforms to the descending melodic scale. Place the illustration in C min. and play each B as B♭. The chord successions are reversible.

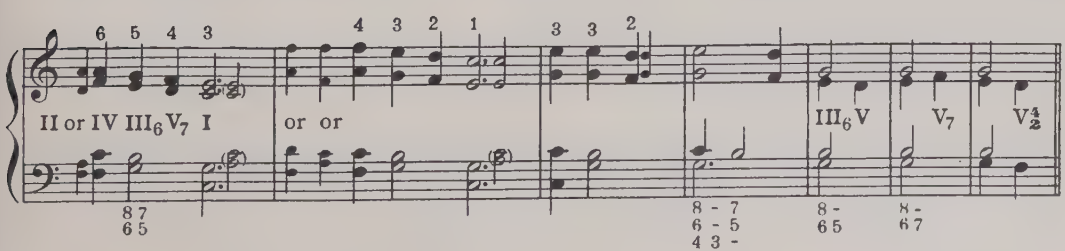
Ill. 213



288. In the following, III_6 with the 3rd doubled takes the place of I_4^6 in the cadence formula (Ill. 142 and 187). Observe the voice-leading in parallel 3rds or 6ths. The chord intervals of III which move act as neighbors of the tones of V_7 into which they progress.

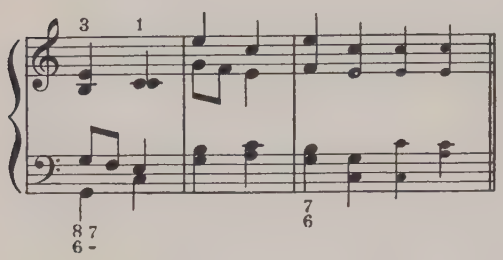
All the groups sound well in minor. Supply the signature of C minor and a ♮ before each B.

Ill. 214



289. These may be understood, for the time being, as uses of III. All the following conditions must be met:

Ill. 215



III_6, 3rd doubled, root in Sop., moving to I or VI.

The Alto or Tenor takes scale-step 5 which passes down through 4 into 3.

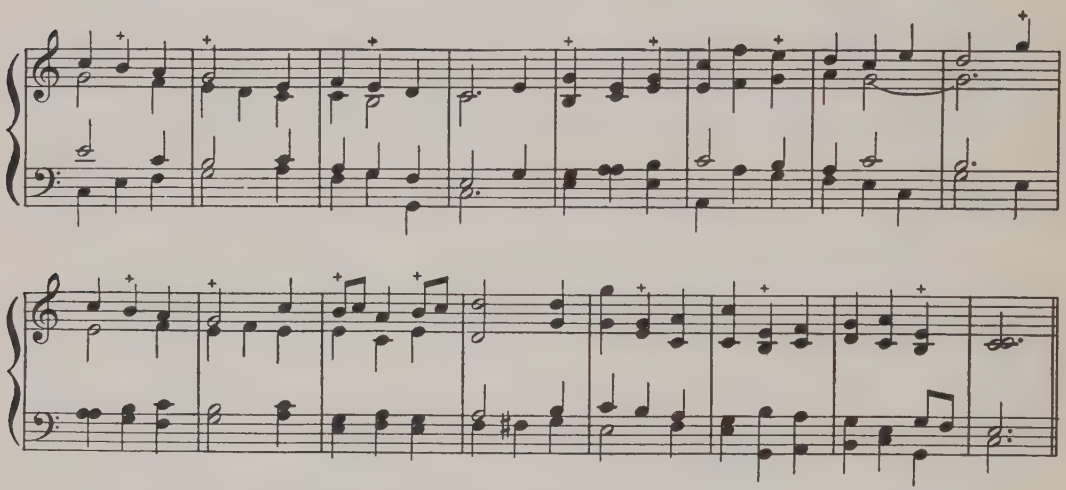
Or—step 4 may substitute for 5, sounding with III_6.

This harmonizes the pattern 3→1, often ending a phrase, or motive.

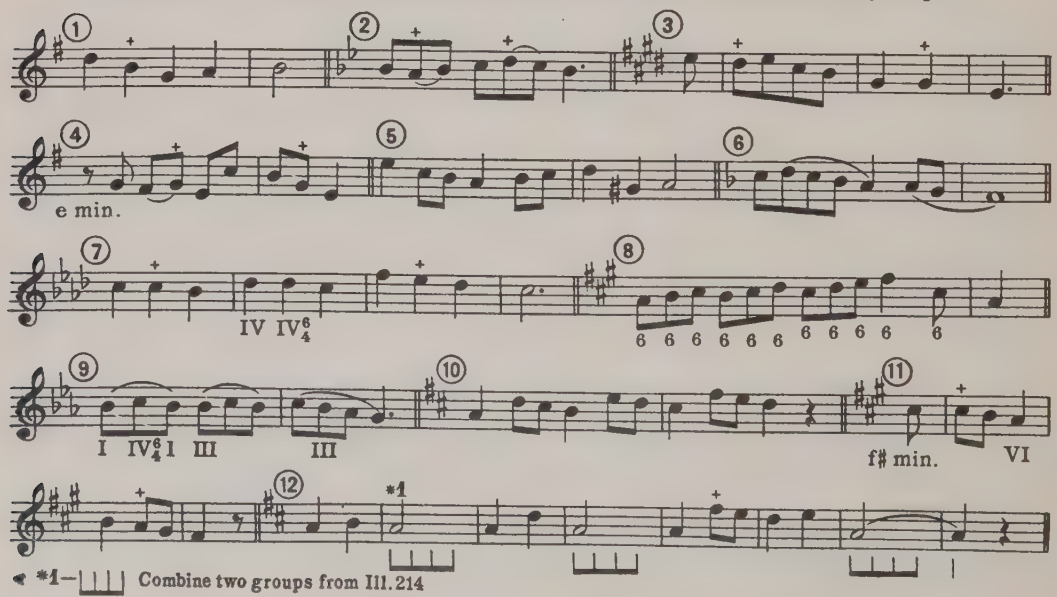
Acceptable in both Maj. and Minor.

290. The following contains many of the patterns of this and the last lesson—possibly too many, but justified in an exercise on the subject.

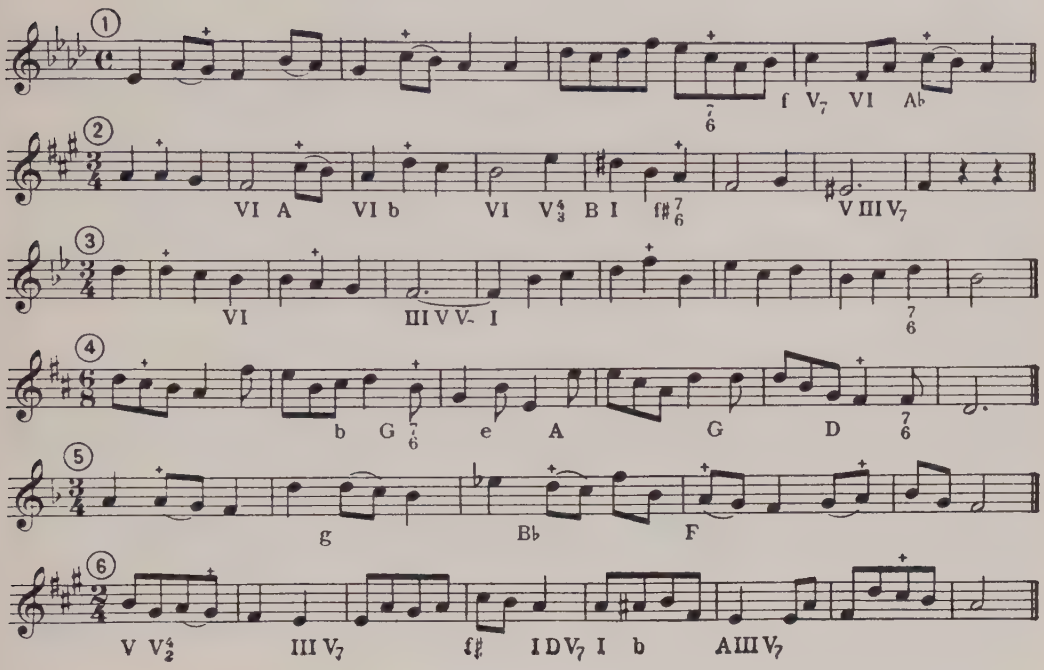
Ill. 216



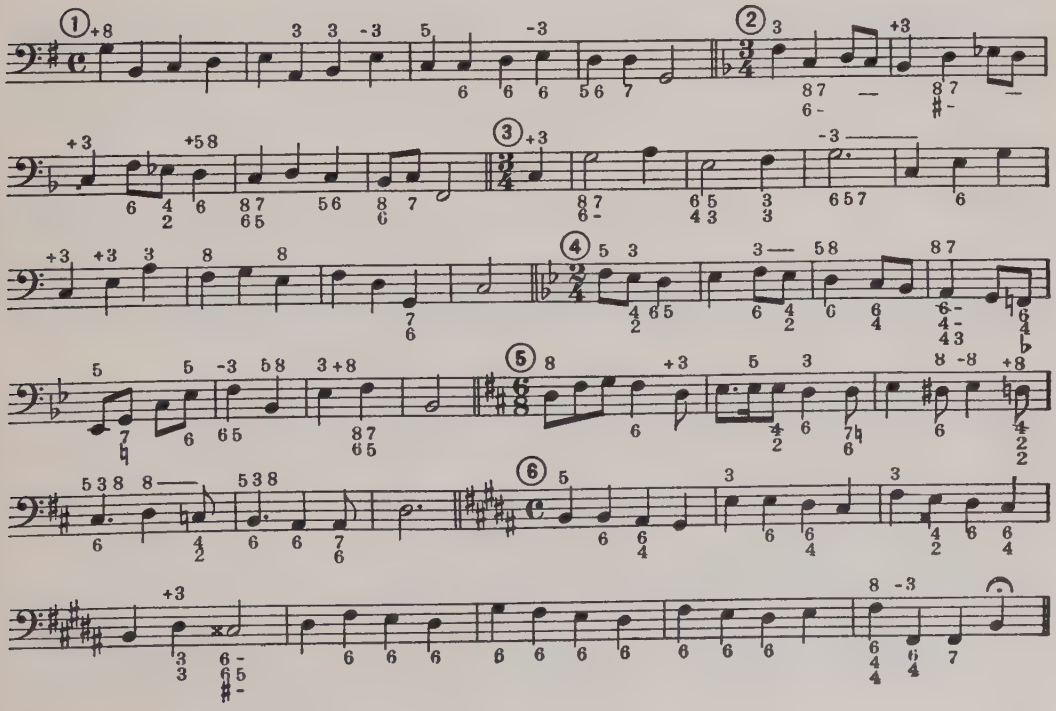
Exercise 127. *Harmonize the fragments, illustrating the lesson-groups.*

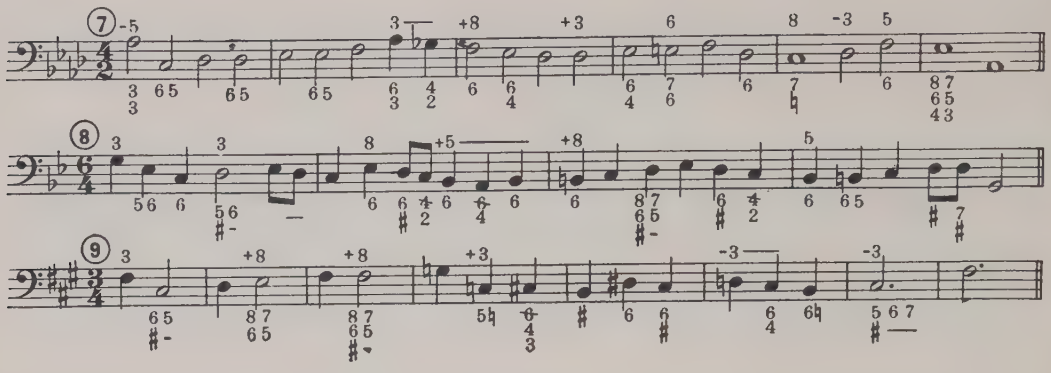


Exercise 128. The following melodies illustrate uses of III, which is to be used at the places marked +.
The new figuration $\frac{7}{6}$ is found in Ill. 215.



Exercise 129. Given bass—illustrating III.
For the meaning of the figuration $\frac{87}{6-}$ and $\frac{7}{6}$ see Ill. 215.



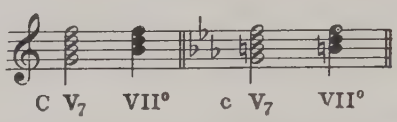


LESSON 86

Leading-Tone Triad

291. V_7 without its root becomes a diminished triad on the leading-tone. It is alike in major and minor.

Ill. 217



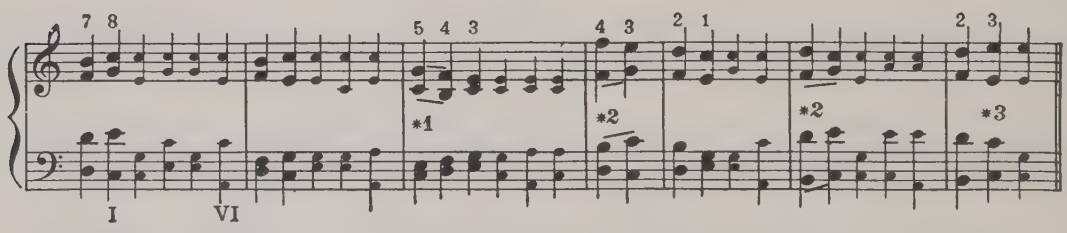
VII° is of relatively slight value. It is often awkward to handle and always the weakest part of the dominant harmony.

292. Its best position is as a 6th chord, with 3d or 5th doubled and root in soprano. The triad and $\frac{6}{4}$ are possible but colorless. The root, being 7 of the scale, may not be doubled.

If the 5th is in the soprano or bass it should descend (usually scale-steps 4.3).

VII° moves into I or VI or a stronger part of V_7. Find exceptions in the illustrations.

Ill. 218



*1 The consecutive 5ths are good because the second is dim.

*2 Cons. 5ths are not incorrect if the first is dim. and the second perfect provided they do not occur between bass and sop. However, the effect of such 5ths is often such as to make their general use questionable. Given a choice of chords, V or V_7 instead of VII° would make them unnecessary.
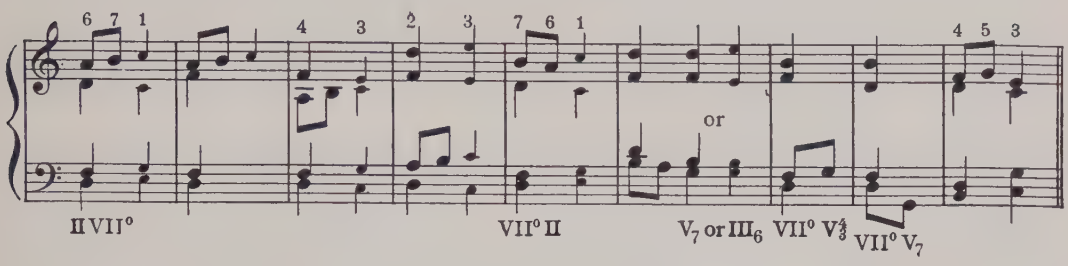
*3 I with two roots and two 3rds is rare but justified by the natural leading of the active scale-steps.

Supply the sig. of C minor to the above and a ♮ before each B. Certain of the VII°–VI progressions become impossible because of augmented skips. Find them.

293. In the following, VII° is used in its most acceptable connections—as part of a couplet.
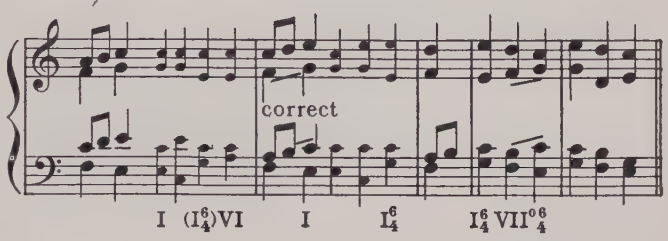
In minor with these chords the scale succession 6–7 and 7–6 will take the ascending melodic alterations—both tones raised. This is because the dom. harmony requires the natural leading-tone.

Ill. 219a



Ill. 219b

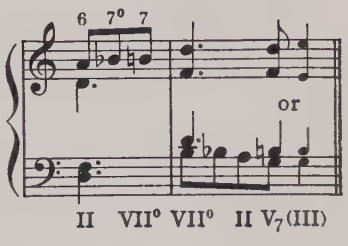
VII^6_4 is rare but acceptable as shown here. Being dissonant, it is not classed with other $^6_4$s nor subject to the particular rules affecting the second inversion.



Ill. 219c
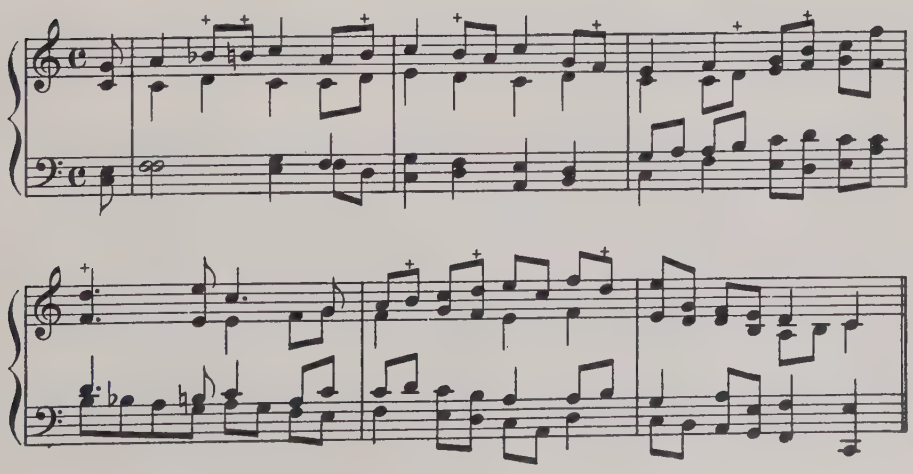
In a chromatic progression 7 is lowered whether ascending or descending. The tone-lines 6.7°.7.8 and 8.7.7°.6 are acceptable in any voice with the harmonization shown.

In minor the leading will require 6+.7°.7 ascending and 8.7.7°.6+.6 descending.

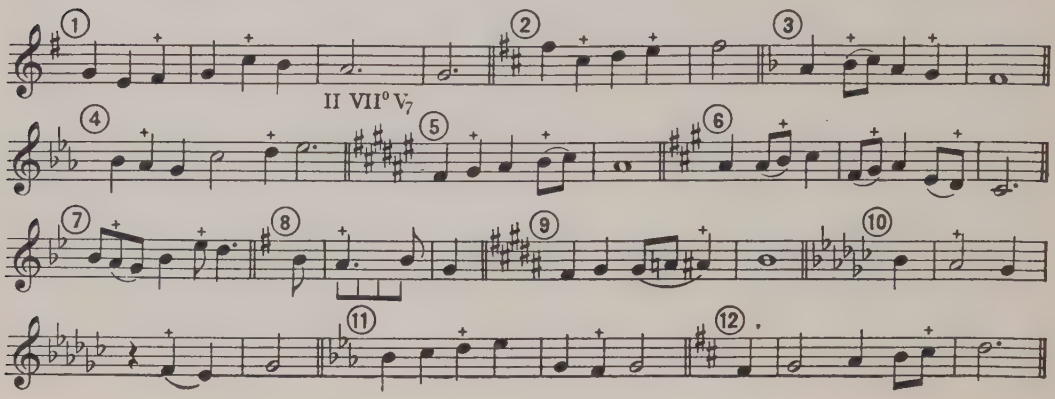


Analyse the following for uses of VII°.

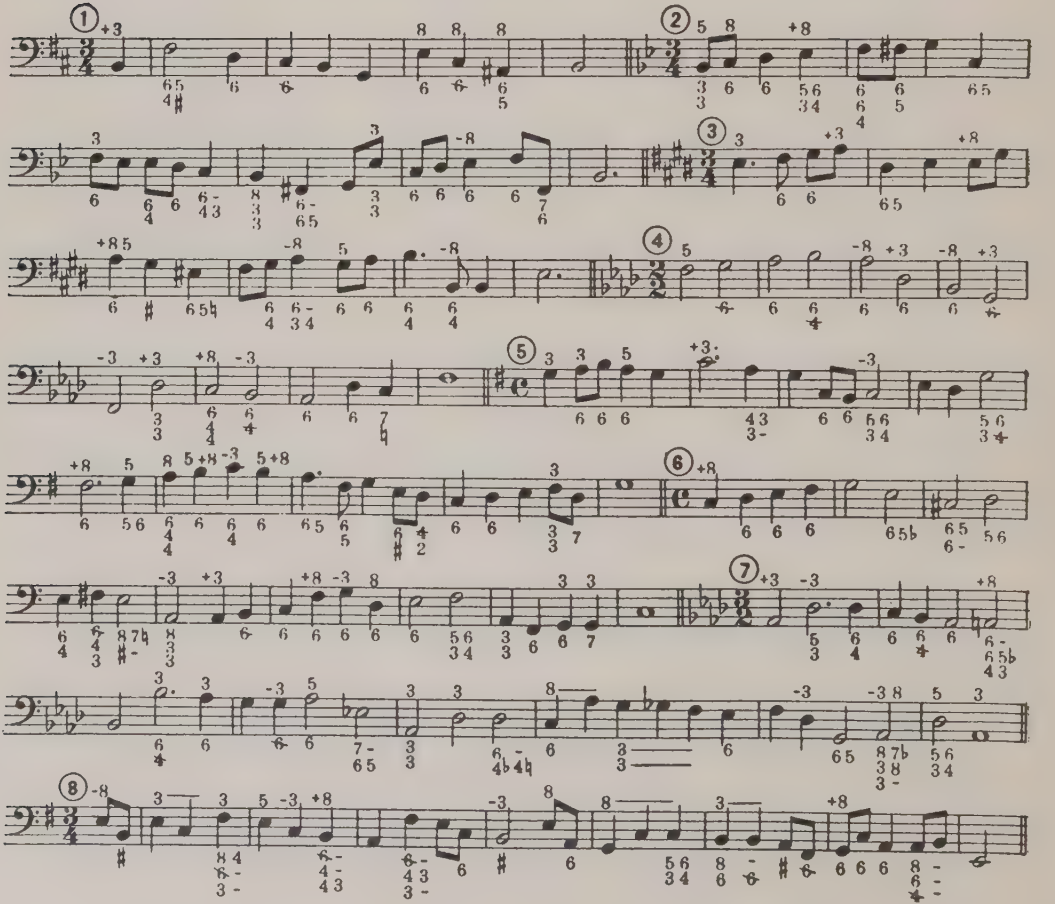
Ill. 220



Exercise 130. Harmonize—using VII° at the places marked +



Exercise 131. Given basses illustrating the use of VII°.
Unusual melody-leaps, such as are required in No. 4 and others, are absolutely good under the circumstances and may be emulated, but with discretion.
Advance reference should be made to Ill. 236 b *3.
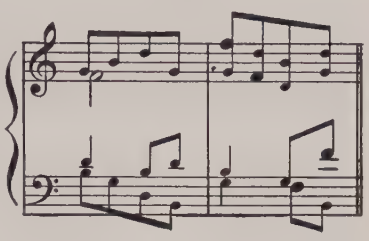


LESSON 87

Irregular Treatment of V_7

294. If any chord but I or VI follows V_7 or, if the chord 7th moves otherwise than down one degree, the progression is classified as irregular. The irregularities consist of either delaying the natural resolution or rendering it unnecessary. Such progressions are important and useful, but require especial care in handling and judgment in application.
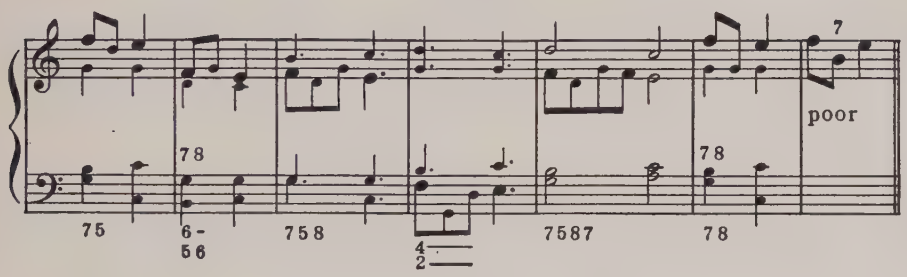
Ill. 221

295. V_7 may be repeated in the same or different shapes. The chord 7th is either retained or made to skip (usually downward) to a chord-tone, another voice taking the vacated interval. The last shape of the chord is resolved regularly or subjected to one of the later mentioned treatments.



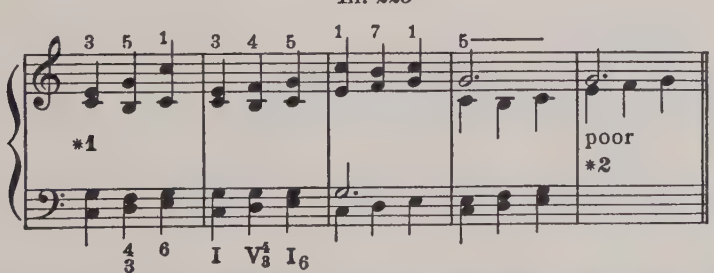
296. Between the 7th and its natural resolution may be interpolated any chord interval or intervals except the 3d (leading-tone). These interpolated tones are usually lower ones. (See exceptions below.)

Ill. 222



297. The 7th may ascend in the chord-group I–V_3^4–I_6. The bass sings the scale-steps 1.2.3, while another voice—usually the Soprano—takes 3.4.5. The common-tone, step 5, is retained throughout. Consecutive fifths often occur but are acceptable in this group.

Ill. 223

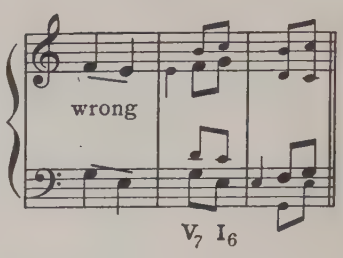


*1 This group, while not strictly in accordance with the others, is still useful.
*2 The voice singing 3.4 5 should not be in the same register as the one singing 5.

298. The 7th must ascend in the group—V_7 (root in bass) to I_6.

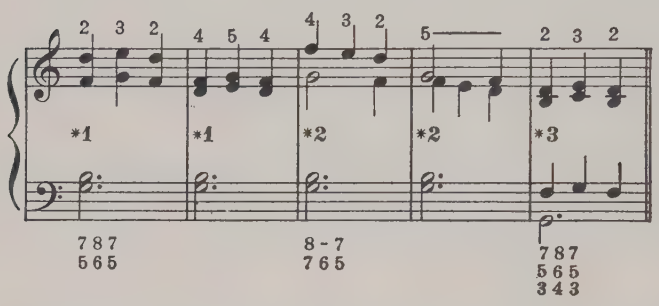
This may occur only in the alto or tenor and then only if the scale-line is 3.4.5. The root and 7th may not move into an octave. If the root sings to some octave of the resolving-tone the 7th itself must evade its natural resolution. Use this treatment sparingly.

Ill. 224



299. The root position of V_7 may be embellished by the interpolation of III_6 or I_4^6 between it and its repetition.

Ill. 225



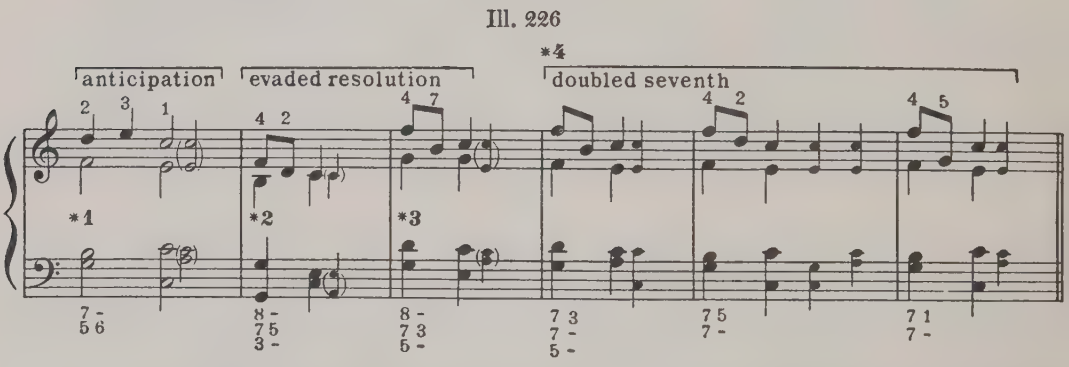
*1 The Alto and Sop. move up and down one degree, momentarily forming III_6. The ascending chord 7th is justified by the immediate return to that interval. Strictly speaking, the interpolated tones are upper neighbors of the 5th and 7th of V_7.

*2 Here, the chord 7th moves down to the root of III, the latter interval acting as a passing-tone.

*3 V_7–I_4^6–V_7 with an ascending 7th is possible when harmonizing 2.3.2 or 7.1.7.

Other irregularities:

Ill. 226



*1 The chord 5th, in the Sop., may ascend one degree before moving into the expected scale-step 1. The interpolated tone (in this instance E) is an anticipation. (See Lesson 52. Compare with Par. 289.)

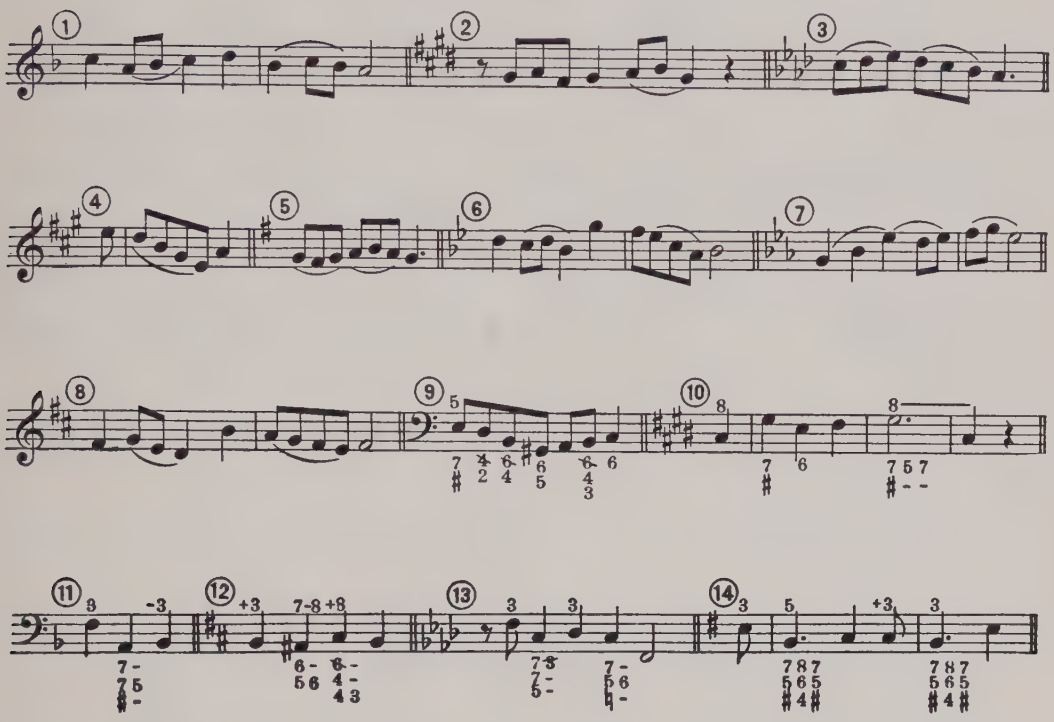
*2 The chord 7th moving to the chord 5th does not return to step 3 as in Ill. 222. The descent of the root in the tenor provides a sufficient resolution. (Compare with Par. 298.)

*3 The 7th skips to the leading-tone, otherwise missing. As the movement of one active tone into another usually requires the resolution of the last one heard, the chord 7th here may evade its regular resolution.

*4 Instances of doubled 7th. One 7th skips down to another chord interval before the natural resolution of V_7 takes place.

All illustrations and explanations of this lesson apply to both major and minor modes. Supply a C minor sig. to the illustrations and a natural before every B.

Exercise 132. Harmonize the following Sop. and Bass fragments. The slurs indicate the use of lesson-groups. Also harmonize in opposite modes; the major keys changing to tonic minors and the minors to tonic majors.
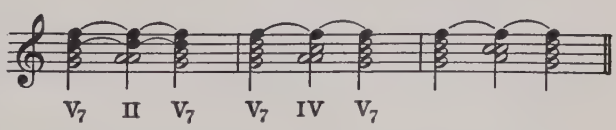


LESSON 88

Passive Resolution of V_7

300. **II or IV** may be interpolated between two similar or different shapes of V_7 or between a V_7 and its regular resolving chords. Such progressions have been called *passive* resolutions because the chord 7th is held or repeated into the interpolated chords, the natural resolution being momentarily delayed.

301. The voice-leading in these groups is almost invariably without a leap.

Ill. 227
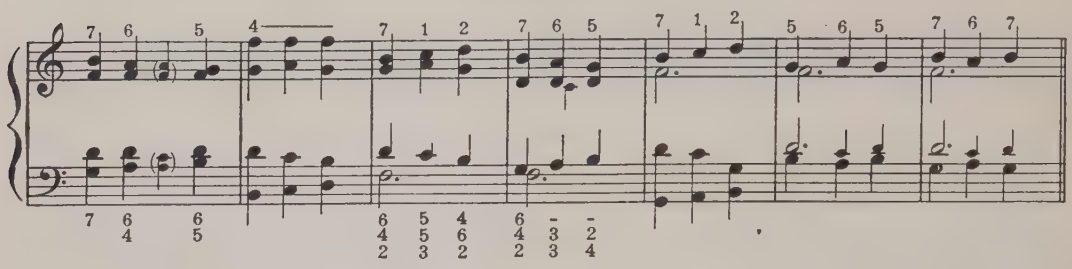


The chord 7th is stationary and, either in the V_7 or while part of II or IV, it may not be doubled. When II is the interpolated chord the 5th of V_7 also is stationary.

One voice usually takes a three-tone diatonic succession beginning or ending on the leading-tone. Another voice takes the same tones in reverse order.

In the following, the first four measures contain the more frequently found groups. All the groups are available for minor keys if due regard is given the

melodic form of the scale. The chords of each group may be used in reverse order and the parts are interchangeable: *i.e.*, any part might be Sop., Alto, Tenor or Bass.

Ill. 228



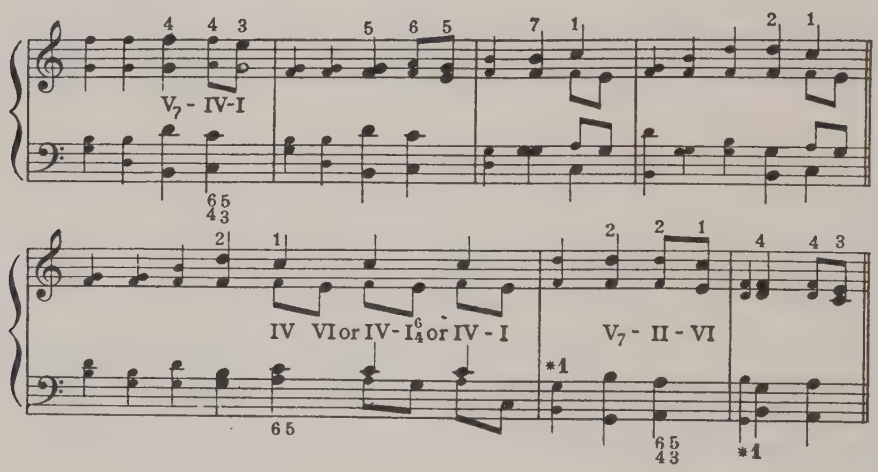
302. In the groups V_7–IV–I and V_7–II–VI, the regular resolution is effected in practically every detail except that it is delayed by the interposition of IV or II, the latter acting usually as a suspension $\frac{6}{4}$.

The chord 7th is held into the IV or II and may not be doubled either in V_7 or while part of the interpolated chord.

Observe at *1 (below) the irregularity of the descending leading-tone.

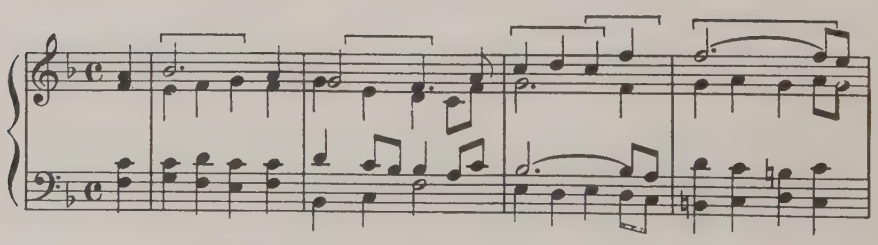
All of the following groups are equally good in major and minor except the last two (V_7–II–VI) which cannot be used in minor.
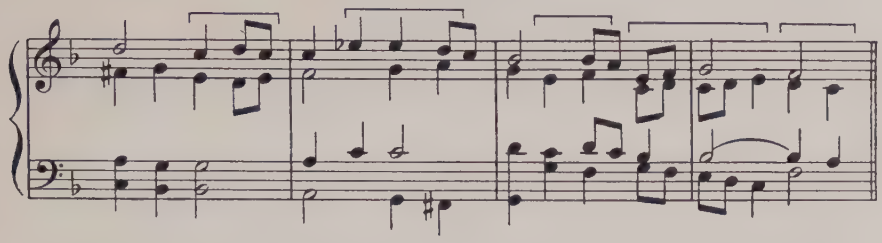
Ill. 229
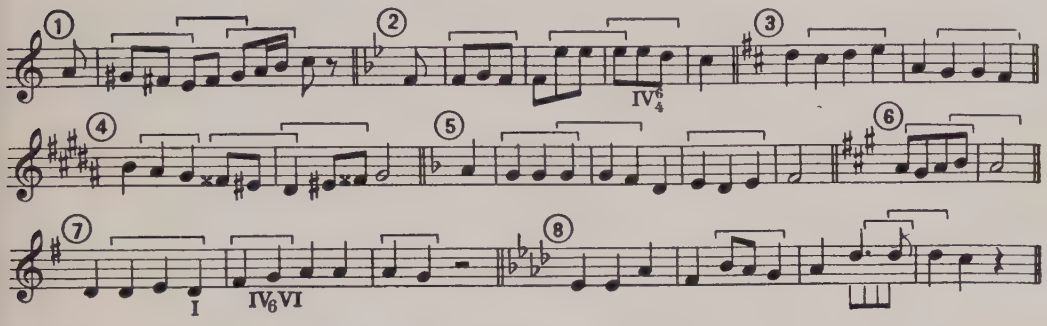


Analyse the following, marking the chords and keys, and compare the passive resolutions with those shown in the lesson illustrations.

Ill. 230

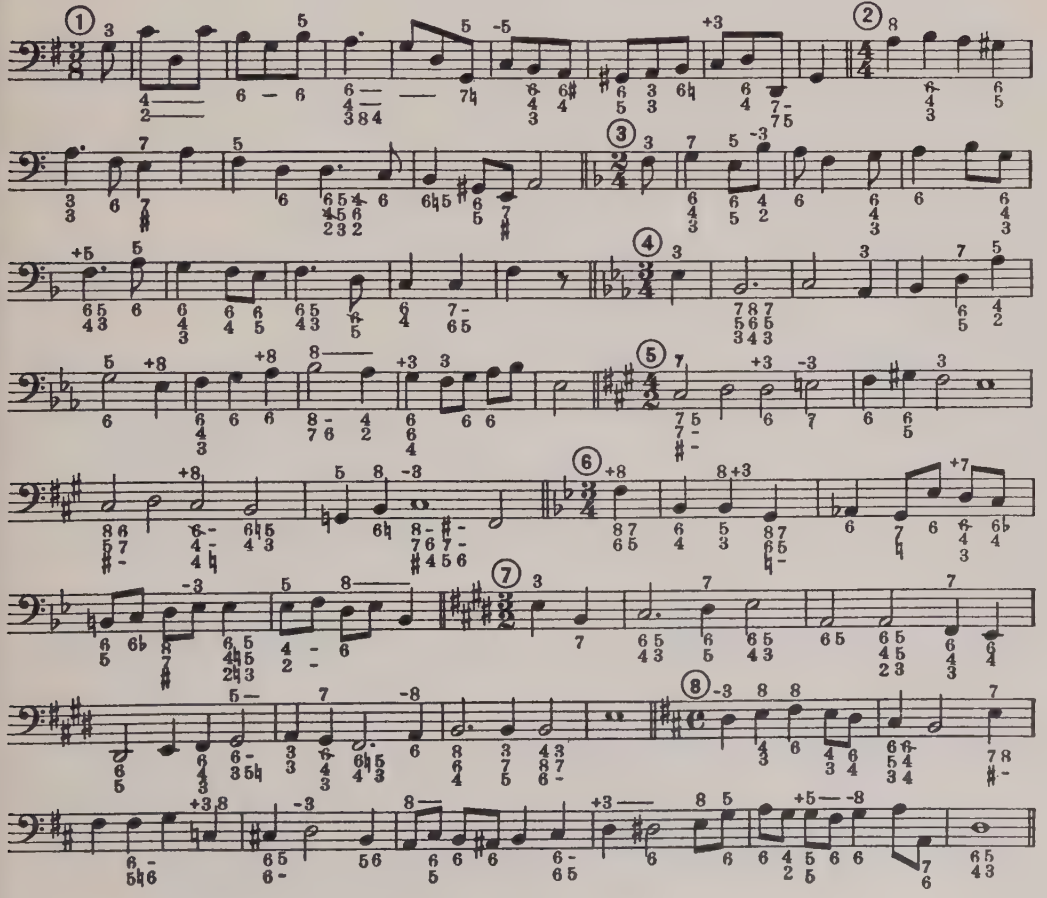




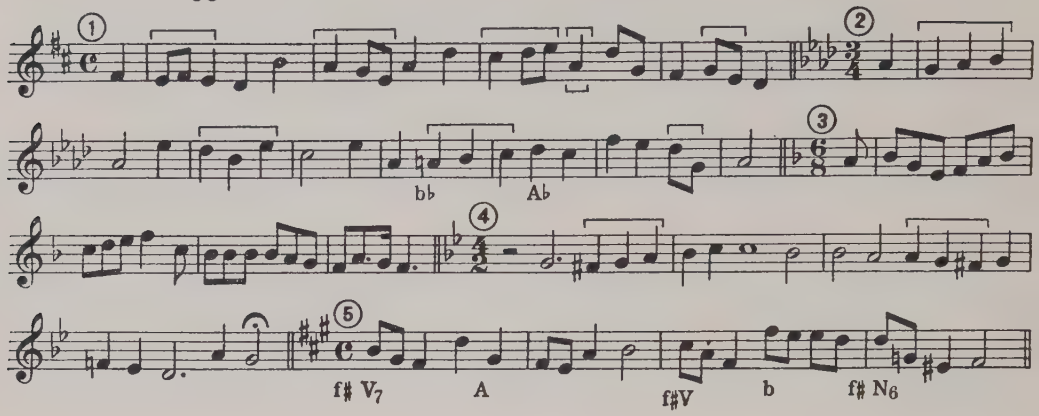
Exercise 133. Harmonize, first in the given keys and again in the opposite mode. Some will not change from major to minor. Why?



Exercise 134. Given bass—illustrating irregular uses of V_7.



Exercise 135. Melodies—illustrating irregular uses of V_7.



LESSON 89

Successive V_7s

303. Any V_7 may progress into any other V_7 under the following conditions:

(a) Common tones, actual or enharmonic, must remain in the same voice.

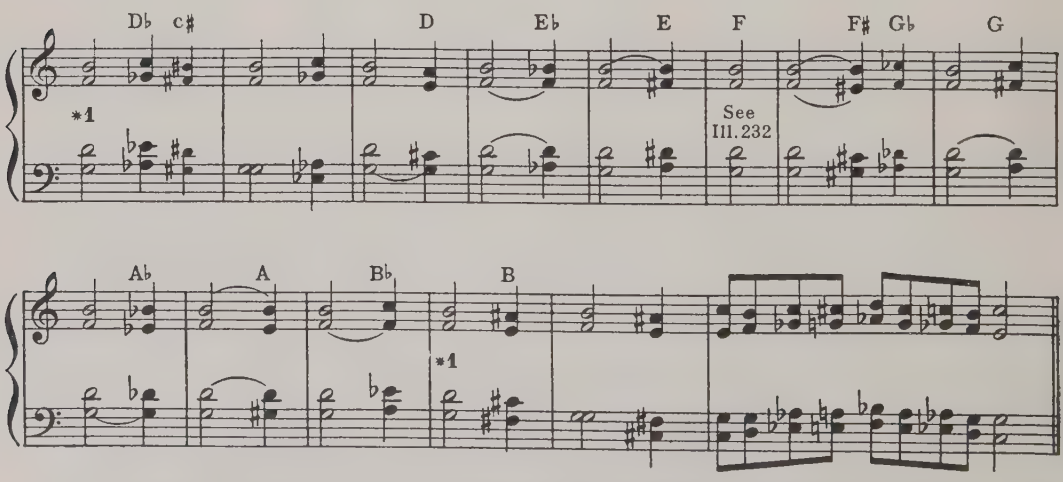
(b) The chord 7th either is stationary, ascends a half-step or descends a whole or half-step.

(c) No voice leaps except (a) to SD V_7 (see Ill. 232) or (b), if the root of the first V_7 is doubled, one root may skip any satisfactory interval to a needed tone of the next V_7.

(d) In a succession of V_7s of the same shape, the half-step progression in each voice is preferable although modern music accepts no dictation in this matter.

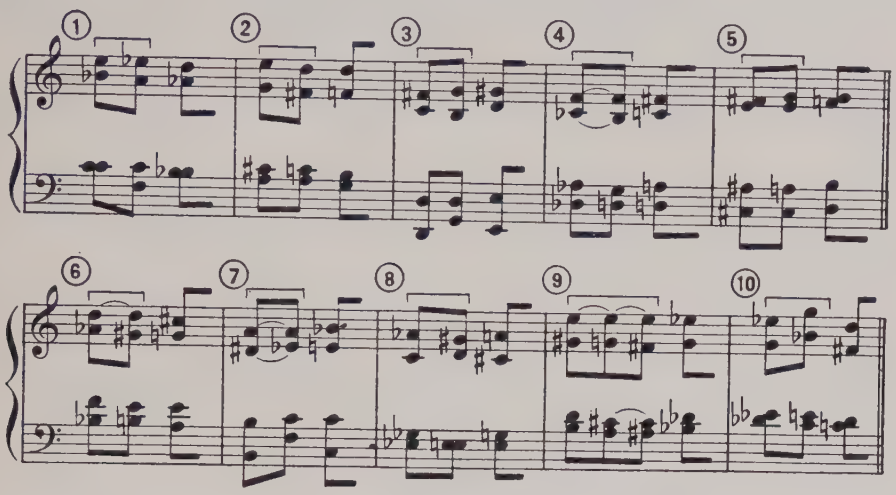
304. The following connects one shape of C V_7 with every other V_7. It is to be understood that any legitimate shape of the first V_7 might have been used.

Ill. 231



*1 Consecutive 5ths moving in half-steps are acceptable in successive dissonant chords without the qualifications of Par. 233. However, it is better to use chord-shapes that avoid them.

Exercise 136. Continue each sequence through four or more measures.

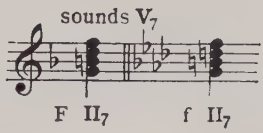


LESSON 90

Altered II_7 Sounding V_7

305. Review Lesson 62.

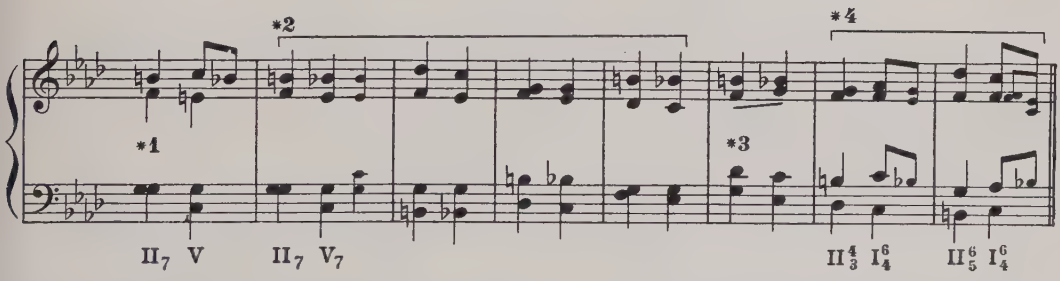
II_7 of maj. with 3rd raised
II_7 of min. with 3rd and 5th raised } sounds V_7 of Dm.



(It may be thought as a Dom. 7th on scale-step 2.)

Inversely, a V_7 may be used as an altered II_7, resolving to V, V_7 or I^6_4 of the key to which it belongs as II_7.

Ill. 232



*1 II_7–V exactly corresponds to a V_7–I. Any V_7–I illustrated in this text is a possible II_7–V.

*2 In II_7–V_7 the voice-leading is the same as V_7–I except that the 3rd of II_7 chromatically descends to the 7th of V_7.

*3 See Par. 298.

*4 II_7–I^6_4 is equivalent to the Passive Resolution V_7–IV^6_4. The first four meas. of Ill. 229 with a signature of F and a ♮ before each B will fully illustrate II_7–I^6_4.

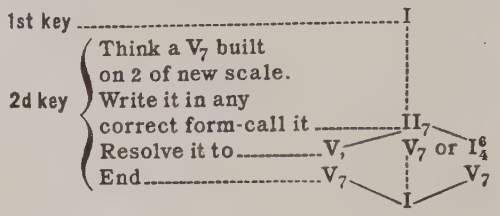
It is worth observing that the only interval of II_7 permitted to skip (in the uses shown) is the root.

306. Practically applied for the purposes of this lesson:

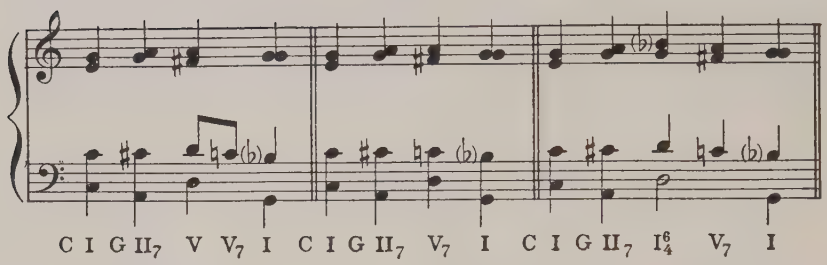
(a) These progressions may occur in a key already established or

(b) they may be used to modulate to any new key, maj. or min.

In the latter capacity, a conventional formula is:



Ill. 233



Exercise 137. Following the plan of Ex. 107, write a number of modulations patterned after the formula of Par. 306. The connection of the first two chords is made according to Lesson 71.

LESSON 91

Aug. 6th Chords Sounding V_7

307. Review Lesson 62.

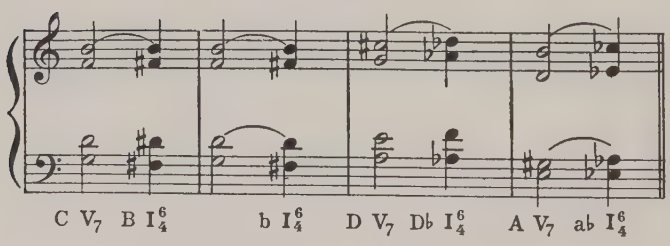
A most distinctive enharmonic use of V_7 is with—

(a) root in bass—no interval doubled or omitted:

(b) bass descending a half-step to a tone which becomes 5 of a new scale, major or minor.

(c) A I_4^6 is built over this new bass-tone.

Ill. 234

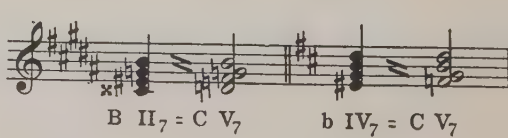


In minor, there are two common tones; in major there is one. The bass descends a half-step, the remaining voice or voices ascend a half-step.

308. Used this way, V_7 is enharmonic with—
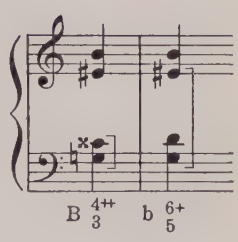
II_7 of Maj., root and 3rd raised, 5th lowered.

IV_7 of Min., root raised.



II_7 of maj., so altered, is called a *Doubly Aug.* $\frac{4}{3}$ because of its position and the interval of a doubly aug. 4th between the bass and root.

IV_7 of minor, so altered, is called an *Aug.* $\frac{6}{5}$ because of the inversion and the space of an aug. 6th between the bass and root.



Observe the manner of designating the chords—$\frac{4}{3}$++ and $\frac{6}{5}$+.

309. Applied to a modulation:—From B♭ to D♭.

I—of 1st key. If this cannot connect with the next required chord, follow it with another chord of the same key or another position of the same chord.
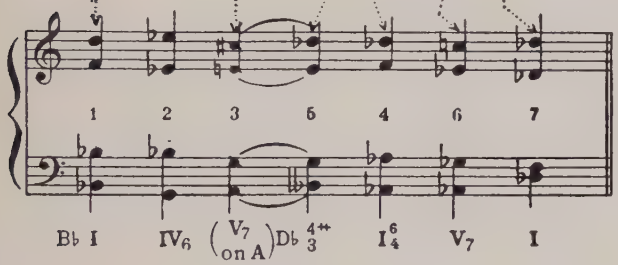
V_7—whose root is a half-step higher than 5 of new scale. Place root in bass.

I^6_4—of new key. (Connection as in Ill. 234.)

Now rewrite the V_7 so that (a) *the tone common to it and the* I^6_4 *is the same letter in both chords* and (b) *the tones that move do so diatonically.* The V_7 is now II_7 of the new key. *Erase* the V_7.

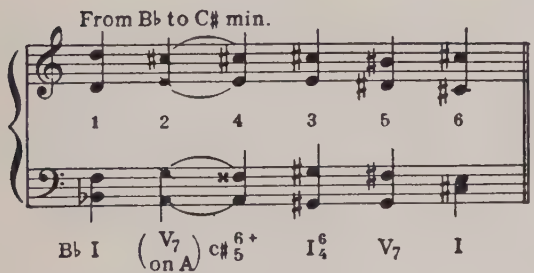
V_7–I of new key.

Ill. 235a



Compare these two modulations. The numbering indicates the order in which the chords were written.

Ill. 235b



Observe the difference in notation between the maj. key $\frac{4}{3}$++ and the minor key $\frac{6}{5}$+.

Exercise 138.

1 Write every V_7 in its elementary shape. Beside each write the II_7 and IV_7 with which it is enharmonic. (Par. 307.)

2 Write II_7 of every major key; IV_7 of every minor key. Alter each according to Par. 308. Beside each write the enharmonic V_7.

3 *Write a number of modulations according to the plan of Par.* 309.

LESSON 92

Résumé of Irregularities

310. Rules have appeared which later have been qualified (or will be) by exceptions or have been broken in exercises and illustrations. It should be understood that "rules" in art are only elementary guides, given to fit the stage of advancement and experience of the student. Many rules relax and musical intention or expediency takes their place. The ultimate authority is precedent—the fact that "it has been done and with good effect" or the justification that "it serves a worthy intention and is dictated by the mature judgment of the composer."

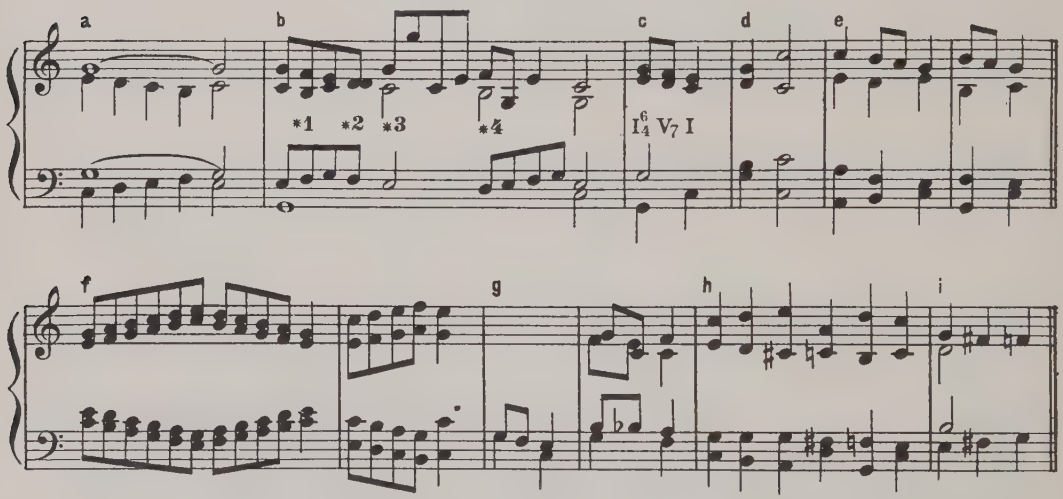
It is impossible to list all "exceptions." A few, scattered through this text, are assembled here for reference.

311. Irregularities in *Doubling,*
Space between Voices,
Crossing of Voices,
are justified by necessary or obviously intentional voice-leading.

The melodic line (in any or all parts) is of greater importance than the chords or the form in which they appear. If the voice movements are good, interesting, logical, much may be overlooked in the matter of chord-shapes, spacings and even momentary effects otherwise unexplainable and inexcusable.

All the following irregularities are correct and good:

Ill. 236



(a) Two voices sustained, diatonic contrary motion in other voices; doubling irregular at first, second and fourth quarters.

(b) *1 *Chord 7th may be doubled if both tones are approached and quitted in diatonic contrary motion.* (Also see Par. 299.)

*2 Doubled 5th in 7th chord; play alto voice alone.

*3 *Over an octave between Sop. and Alto or Alto and Tenor acceptable if for not more than a few beats and resulting from a gradual progression of the two voices in contrary motion or from either voice taking successive intervals of one chord while the other sustains.*

*4 *Crossing of voices is never wrong in itself but is a device reserved for special effect. It should be used sparingly.*

(c) Irregular doubling; parallel 3rds against sustained tones.

(d) Four roots in I; extremely rare.

(e) *Leading-tone may be doubled in III: also in the dom. harmony if in a line of diatonic tones duplicated in reverse order in another voice or if one of the doubled tones moves to another chord-tone before the other resolves.*

(f) Obvious designs—in these instances, parallel 3rds and 6ths in contrary motion; all irregularities justified.

(g) The voice crossing of short duration. (See [b] *4.)

(h) See (b)*3.

(i) *An altered tone may be doubled if approached and quitted in contrary motion without a leap.*

312. *Consecutive octaves* and *unisons* are altogether forbidden in any stipulated number of parts, but are perfectly good in practical composition when they serve the composer's purpose.

313. *Consecutive fifths* are usually not good if both are perfect except:

(a) If they move by half-steps in two voices not including the sop.

(b) In consecutive dissonant chords of the same class (V_7, V_9, etc.).

(c) For deliberate effect.

They are permitted if the first is dim. and the last per.:

(d) In the chords I–V_3^4–I_6. (See Ill. 223.)

(e) In resolving $VII°_7$ to I (Ill. 219c and Par. 332).

(f) Or, V_5^6 to VI if the upper tones of the 5ths are not in the sop.

They are not open to question:

(g) If the last is diminished or either is augmented.

(h) If in contrary motion and not involving the sop.

(i) If the result of repeating the same 5th in the same or different registers.
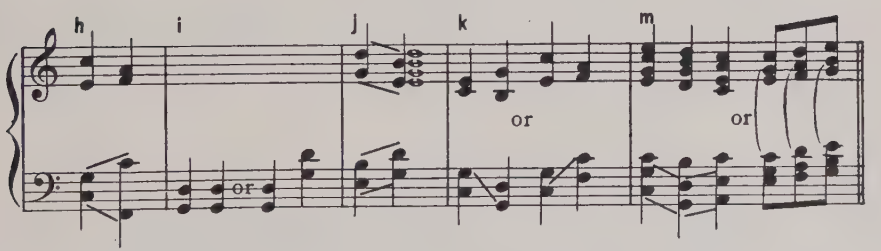
(j) If both 5ths are part of one chord.

(k) Between bass and tenor if both 5ths have a common tone (in the same or different registers).

(l) If a tone of either 5th is unessential (Ill. 314).

(m) If a sufficient number of voices (in excess of four) serve to cover the effect of individual leadings.

Ill. 237
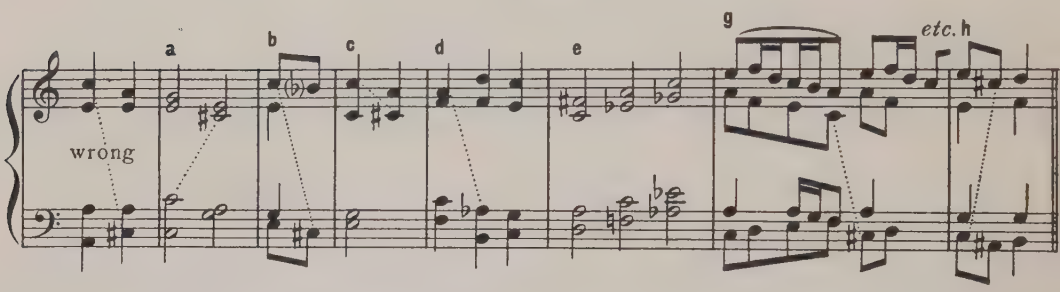


314. *Hidden Consecutives* result from parallel motion to a perfect octave, fifth or unison, from an interval *not* an octave, fifth or unison. The older texts have made much over such progressions with the sole result of intimidating both pupil and teacher. If there ever were a reason for their consideration it has not been for the last century and a half. The term may be considered obsolete and the only rule of importance involving the subject is the following: *The two tones of a dissonant interval should not move in parallel motion to a doubled resolution tone.* (See Ill. 224.)

315. *Cross relation* results from a violation of the rule—"a tone and its alteration should occur in the same voice." As with "hidden consecutives" there is very little reason for mention of the subject. The following are a few of the exceptions which may be freely used by the pupil:

Cross relation correct—

(a) If occurring in the same register.
(b) If the tone about to be "cross-related" does not leap.
(c) If a tone is doubled and one moves chromatically and the other by any good interval.
(d) If the second of the two chords is of a strong dissonant quality.
(e) In a succession of chords of the same class.
(f) In sequences.
(g) In abrupt modulations after the termination of a motive, phrase or period.
(h) If the second of the two tones involved is a neighbor.

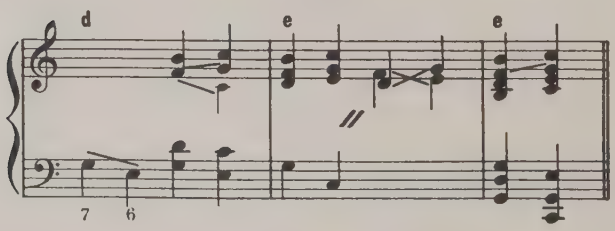
Ill. 238



316. *Resolution of Seventh Chords.* The chord seventh usually descends one degree but:

(a) May skip to another interval of its own chord.
(b) May be held into the next chord.
(c) May ascend one degree under particular conditions (as in $I–V^4_3–I_6$, Ill. 223).
(d) *May not descend* one degree if the root of the 7th chord skips down a third (as in $V_7–I_6$).
(e) In pianistic arrangements, where the progression may be construed as voice-crossing, the chord 7th sometimes evades the natural resolution.
(f) In II_7 may assert its privileges as an inactive scale-step.

Ill. 239



317. *Six-Four Chords.* Do not skip to or from the bass of a $\frac{6}{4}$ chord except in the case of chord repetition, cadence and suspension $\frac{6}{4}$s and $\frac{6}{4}$ positions of dim. triads.

Do not use them successively unless (a) in chord repetition or (b) if all or alternating chords are dim. triads or (c) for particular effect.

318. *Melodic Leaps.* Certain scale and chord-tones dictate their own progressions. Except for these, musical judgment and the range and technique of the instrument or voice being written for are the arbiters of the worth or practicability of unusual skips.

319. This section must be considered as applying chiefly to analysis. Its application to written harmony may be as detailed as the advancement or temperament of the pupil warrants. The "rule" must be understood before the "exceptions" can be used. The judgment of the instructor will have to be exercised in relaxing from strict writing. However, too much dogma is as bad as unrestrained freedom and it is better to encourage experimental "transgressions" than to stifle individuality and enterprise.

Many composers have rued their study of harmony, claiming they were hampered for years afterwards by pedantic ritual and prejudice. Many of them were declared by their teachers to be hopeless because they ventured to experiment with harmonic material.

A general pedagogical rule is:—give gradually increasing freedom to the gifted pupil; train the ungifted one along strict lines. From all, demand an explanation and justification of every progression.

And above all, require an audible test of every progression written. The note must represent sound. The ability to write away from an instrument is acquired only after much experience with the instrument. The harmony pupil is acquiring a musical vocabulary. The words have to be used in audible reading and conversation before the mind can reason in the new language. Furthermore, few pupils are studying harmony with practical composition in mind; fewer of them have that gift. The real purpose of the study is to develop an ability to hear and understand from the printed page. And who can hear inwardly what has never been heard audibly?

In brief, the most vital need of disciplining a pupil arises when it is obvious that the written work has not been tested at the piano. And the greatest praise is due the one whose work shows logical effort and who can offer an explanation of the purpose of the effort. It might be entirely incorrect and the judgment faulty, but such faults can be corrected.

LESSON 93

Leading-Tone 7th

320. $VII°_7$ of a major key is called a *Leading-Tone 7th Chord* to distinguish it from the minor key $VII°_{7°}$. As with all dominant chords it naturally moves into I. It is less often used than any part of V_9, except the triad VII°.

No interval may be doubled or omitted.

Any shape or position is possible. The third inversion is least good.
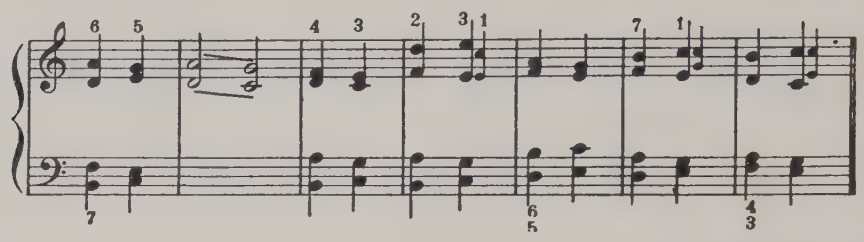
The chord 7th sounds best in the soprano. In any voice it is advisable to approach it diatonically or by repetition; when the chord remains the same the usual freedom of exchange of intervals is possible.

Any triad can be shaped to precede it, care being necessary in some instances to avoid consecutives and bad voice-leading.

321. *Regular Resolution:* VII°$_7$–I.

All tones move diatonically. The root ascends, the 7th descends. The 3rd ascends, the 5th usually descends, but both may move otherwise if melodic or harmonic reasons exist. In Ill. 240, note the doubled 3rd in I. Avoid the consecutives shown at *1.

Ill. 240



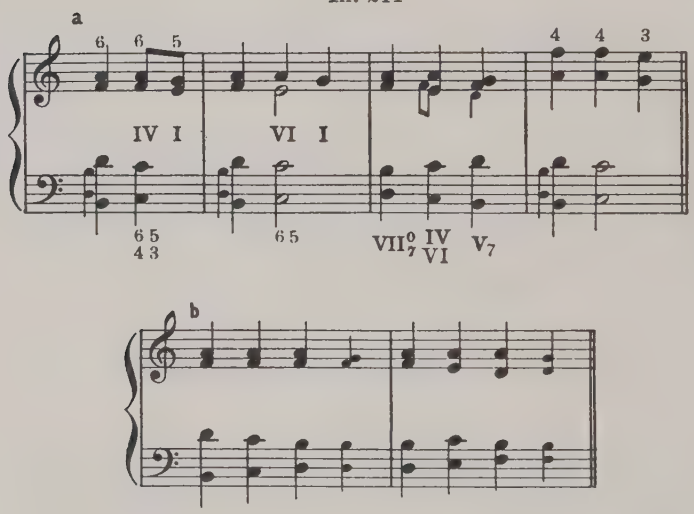
322. *Passive Resolution:* VII°$_7$–IV–I : VII°$_{7^\circ}$–VI–I : VII$^\circ_7$ {IV or VI} VII$^\circ_{7^\circ}$ (or V$_7$).

The mechanism of effecting the passive resolution and the general details of voice-leading are the same as for V$_7$. Ill. 228 and 229 with a signature of A-major, will prove this and suggest groups not illustrated here. Compare them with the one below.

The melody patterns admitting of the harmonizations shown below are

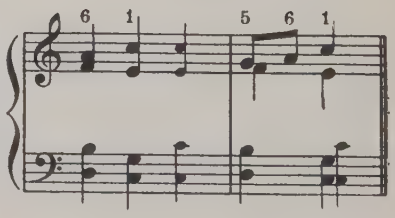
6.6.5: 4.4.3: 6.6.6: 4.4.4: { 7.1.2: 2.3.4 / 2.1.7: 4.3.2

Ill. 241
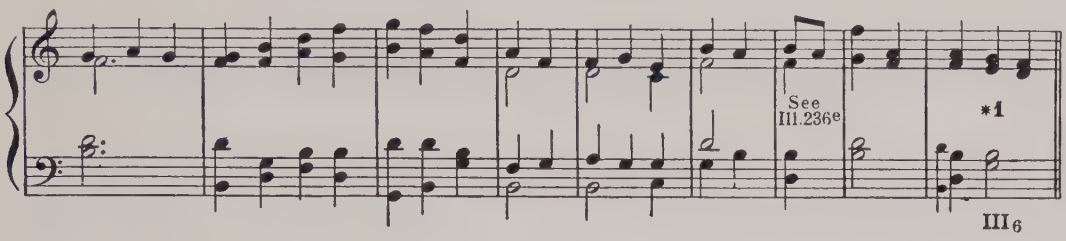


323. An irregular and rare treatment of VII°$_7$ is shown. It appears as a $\frac{6}{5}$ chord with the chord 7th in the sop. ascending a third to the root of I. To be acceptable, every detail of shape, position and voice-leading shown in Ill. 242 must be met.

Ill. 242
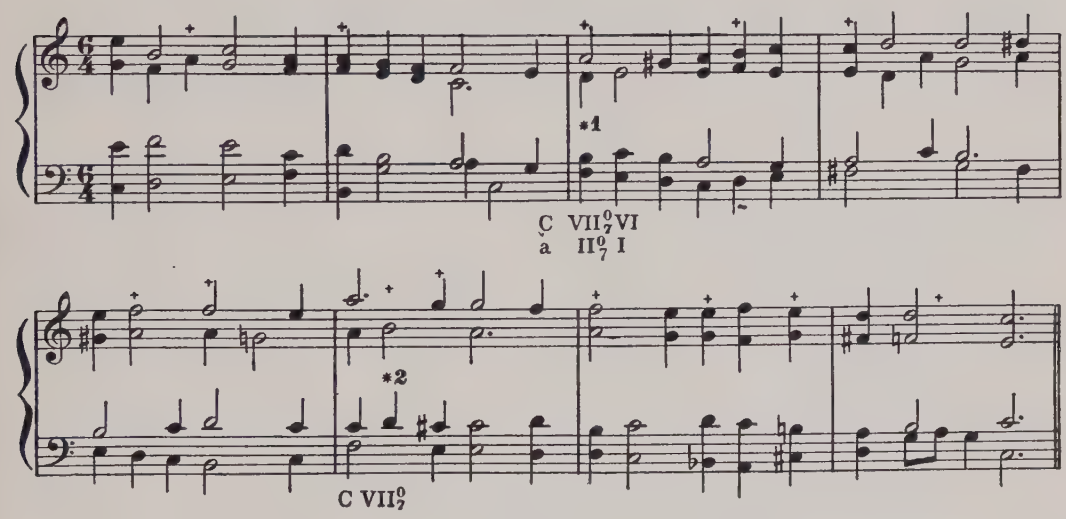


324. VII°$_7$ and V$_7$, both belonging to V$_9$, connect with each other freely, being governed in their inter-connections only by the rules affecting chord repetition and movement of active scale-steps. Note the III$_6$ at *1. Here III$_6$ acts as a substitute for V$_{(7)}$.

Ill. 243

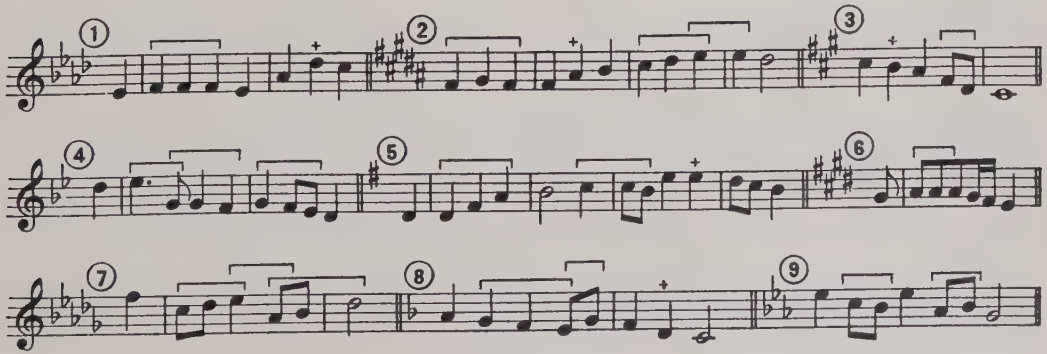


325. In the following, VII°$_7$ is used as suggested by the lesson groups and also in other connections. At *1 VII°$_7$ in a passive resolution effects a modulation to the relative minor and becomes a II$_7$. Note the successive VII°$_7$s at *2.

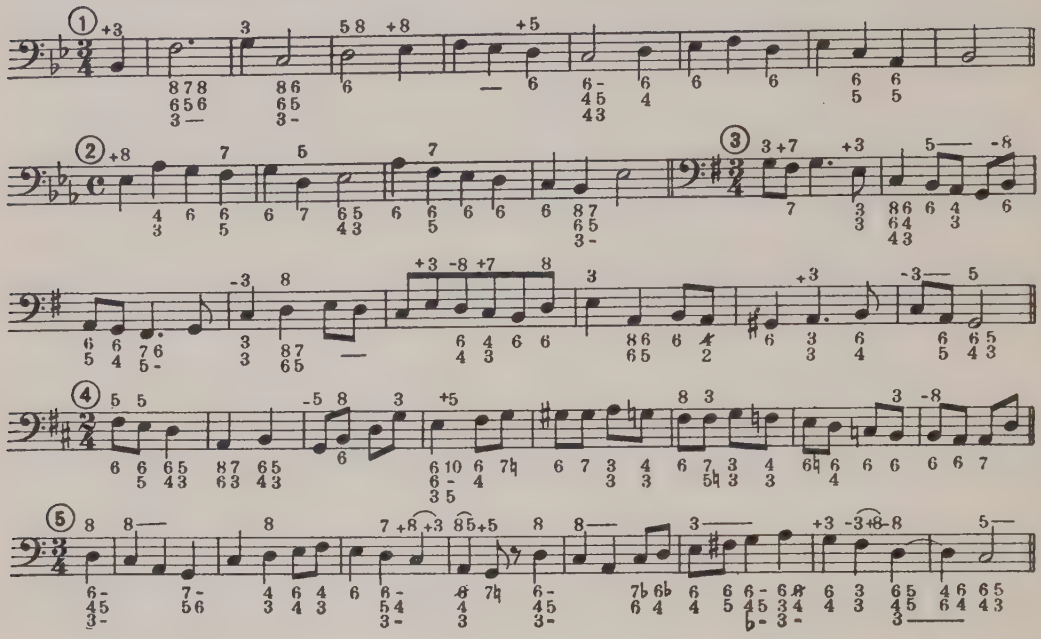
Ill. 244



Exercise 139. VII°$_7$ is called for at places marked + and lesson groups are indicated by ⌐¬



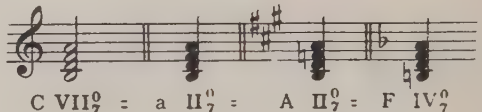
Exercise 140. Basses illustrating VII°$_7$.



LESSON 94

II$_7$ AND IV$_7$ SOUNDING VII$^\circ_7$

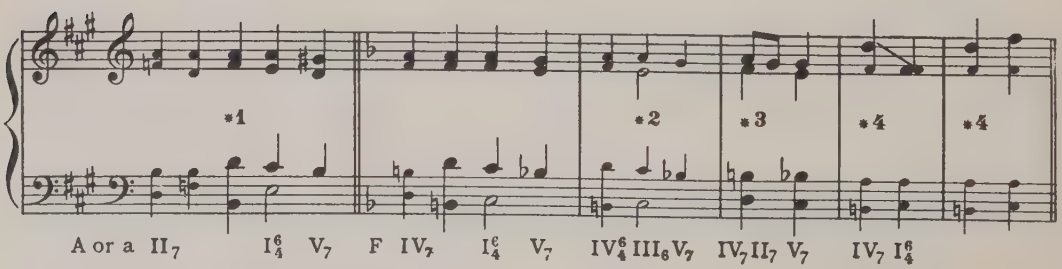
326. II°$_7$ of minor, unaltered
II$_7$ of major, 5th lowered
IV$_7$ of major, root raised
} each is identical with some maj. key VII°$_7$



Inversely:

VII°$_7$ of maj. key (passive resolution) may become:
II°$_7$ of SM min.
II°$_7$ of SM maj.
IV°$_7$ of SD maj.
} followed by I$^6_4$.
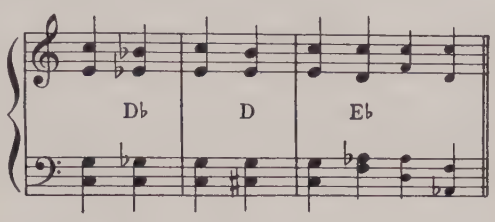
Ill. 245



*1 The root of a II°$_7$ may skip to scale tone 5.
*2 See Ill. 241.
*3 This combines the detail of Lesson 90 with the present one.
*4 Irregular but not unusual.

It should be noted in Ill. 245 that $II°_7$ may have its root, 3rd or 5th in the bass while $IV°_7$ has only its root or 3rd.

Exercise 141. (a) Complete the following table, connecting C I with every $VII°_7$.



(b) Write $II°_7$ of every min. key:
$II°_7$ of every maj. with lowered 5th:
$IV°_7$ of every maj. with raised root.
Give each a designation as $VII°_7$ of a major key.

(c) Write a number of modulations after the plan of Ex. 107, and according to the following formulæ.

(1) 1st Key — New Key (Maj. or Min.): I — $II°_7\ I^6_4\ V_7\ I$

(2) 1st Key — New Key (Maj.): I — $IV°_7\ I^6_4\ V_7\ I$

LESSON 95

Diminished 7th Chord

Review Lesson 49.

327. A Dim. 7th chord is unique in its intervals, containing three minor 3rds, two dim. 5ths, a dim. 7th and two dim. triads.

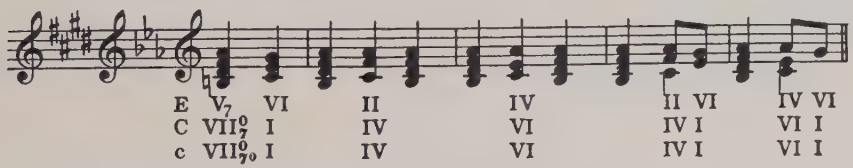
All shapes and positions are equally good.

As there is no perfect interval and *as no tone may be doubled* it follows that, in an approach to it, there is no danger of incorrect consecutives. However, what is a convenience in this respect adds to the danger of bad voice-leading, particular care being needed to avoid skips of aug. intervals.

328. The regular and passive resolutions are the same as for $VII°_7$ of the major. Therefore, Ill. 240 and 241 will show proper treatment of a Dim. 7th if a signature of C minor is added and a ♮ placed before every B.
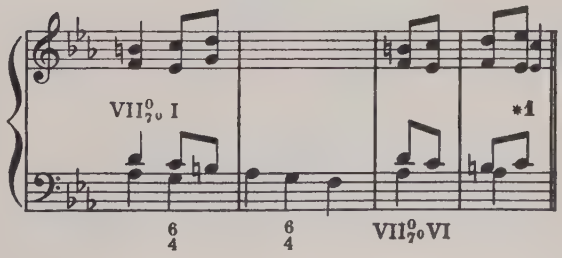
The similarity of V_7–VI, $VII°_7$–I and $VII°_{7o}$–I is evident from the following:

Ill. 246



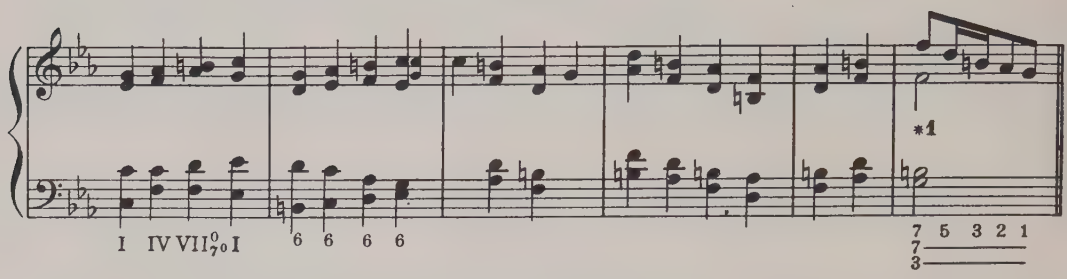
Ill. 247

329. The resolution of the third inversion, not having been shown in Lesson 93, appears here. Observe that, of necessity, I is a $\frac{6}{4}$ and therefore is subject to the rules of that inversion. Also note the doubled 5th in the triad VI at *1.



330. A reason for the avoidance of the aug. 2nd in voice-leading is that it is too expressive an interval for indiscriminate use. Chord repetition or the melody patterns 1.7.6.5 or 5.6.7.1 makes it a possibility. Avoid it in the lower three voices except in chord repetition.

Ill. 248

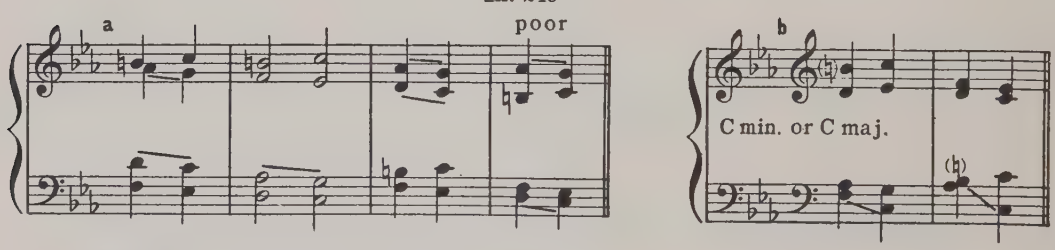


*1 If one chord-shape is used for a series of melody-tones, the first and last shape must be faultless. The intermediate ones may violate rules of doubling and omission of tones, and the space between Sop. and Alto momentarily may exceed an octave.

331. The Dim. 7th chord is freely used in the major mode, resulting from the 7th of the Leading-Tone 7th being chromatically lowered. The details of resolution and progression are exactly the same as in the minor. Ill. 240, 241 and 243 will illustrate this if every A is flatted. The passive resolution will require that the 3rd of IV or the root of VI be flatted also. In analysis, the chord is named according to its resolution:—VII°7 of the maj. or VII°7 of the minor.

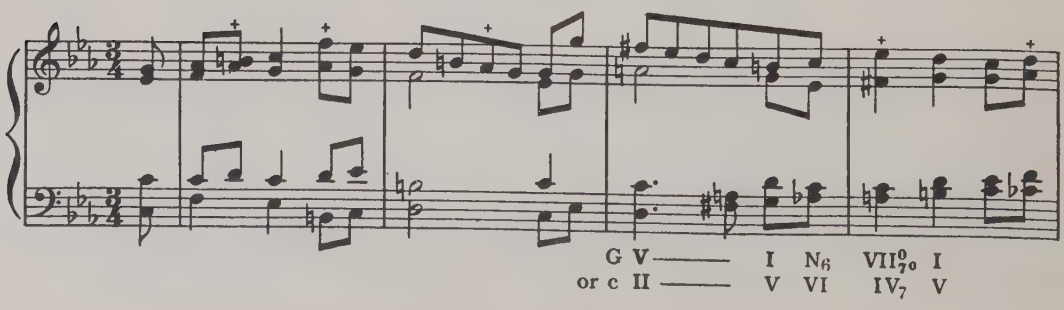
332. The following progressions are irregular but passable. The cons. fifths, dim. to per. are not good between extreme parts. Otherwise they may occur if the melody-leading in any voice is improved as a result. Sparing use of irregularities is urged.
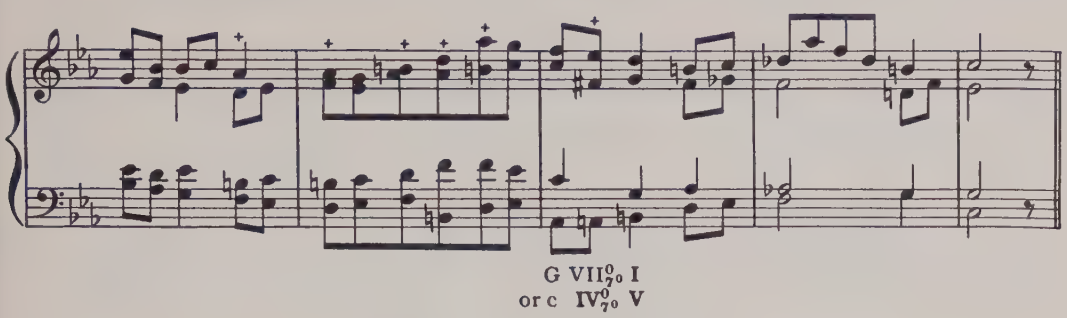
Ill. 249



Analyse the following for uses of VII°7.

Ill. 250

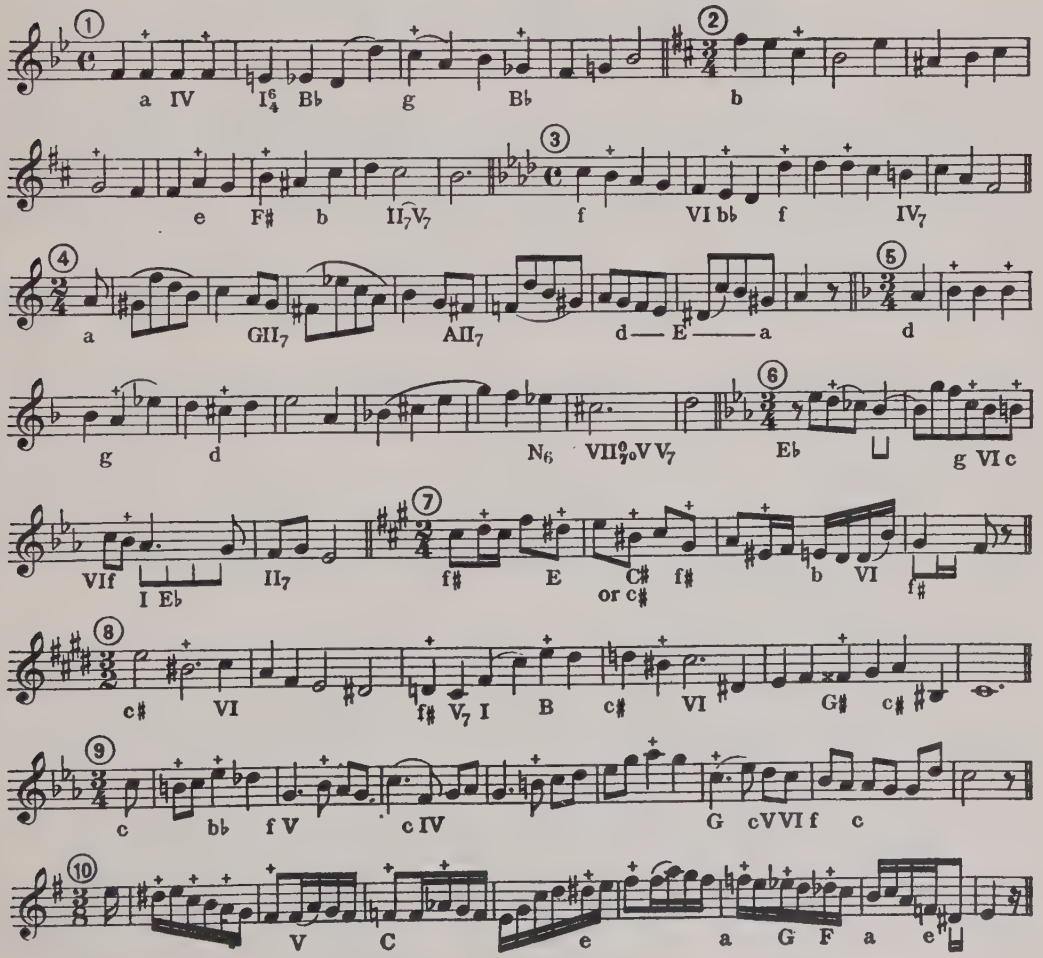




Exercise 142. The indications of keys and chords are intended to be helpful. They may be ignored if chords selected preceding the indications do not lead satisfactorily into the specified ones.

Certain of the modulations later will be understood as progressions from altered chords.

IV_7 and II_7, called for at several places, are to be in the altered form according to Lessons 90, 91 or 94.

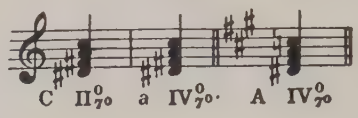


LESSON 96

Dim. 7th as Altered Chord

333. Maj. key II_7, Min. key IV_7 ..root and 3rd raised; Maj. key IV_7....root raised, 7th lowered } become Dim. 7th chords.

Ill. 251

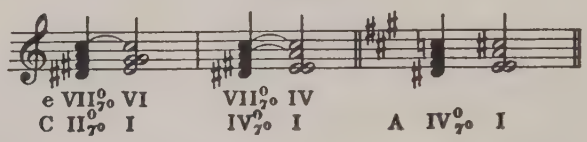


So altered, they resolve passively into I^6_4 of their key, the 7th being retained and the other intervals led diatonically.

As $II°_{7}$, place the 3rd or 5th in bass.

As $IV°_{7}$, place root or 3rd in bass.

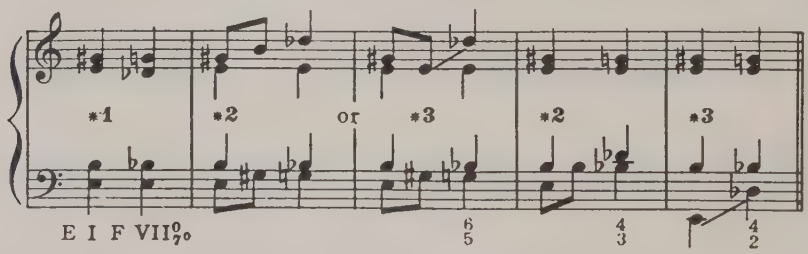
Ill. 252



*1 The altered IV_7 is a misnotation of II_7. The irregularity is obvious—the chord 7th has been lowered and then made to ascend—the C♮ should be B♯. However, the misnotation is so frequently met with that no practical objection can be made to it.

The simplest way of thinking these chords is "a Dim. 7th on 2^+ of maj. and 4^+ of maj. or min."

Exercise 143. (a) Complete the following table, connecting in turn the I of E with $VII°_{7}$ of every other key in all positions.



*1 Aug. 2nd in inner voice acceptable in moving to $VII°_{7}$.
*2 Position of I changed to keep "tone and its alteration in same voice."
*3 Aug. 2nd avoided by inversion to dim. 7th.

(b) Write a number of modulations after the following formula:

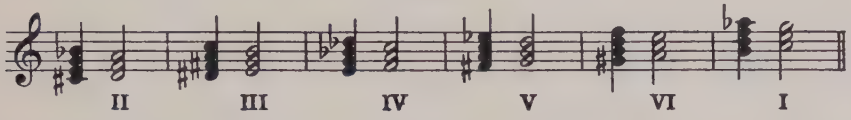
1st Key	New Key
I	Dim. 7th on 2^+ 4^+ Maj.; 4^+ Min. — I^6_4 V_7 I.

LESSON 97

Dim. 7th on Other Scale Degrees

334. It is technically possible to precede any maj. or min. triad with a VII°$_{7}$ of the key in which the triad could be I.

Ill. 253
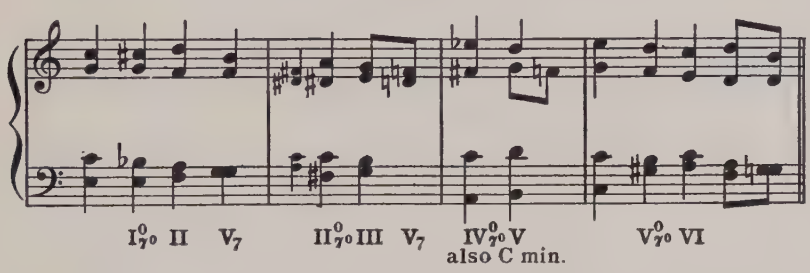


Such progressions are likely to be actually VII°$_{7}$–I, but association with chords immediately following might make them altered 7th chords moving into adjacent triads. If the latter, no prominence in accent or duration may be given either the Dim. 7th or its resolving triad and the prevailing key must immediately be reëstablished.

Chords appearing to be VII°$_{7}$, but which might be otherwise are:

Maj. key: Dim. 7th on 1^{+} to II. (I°$_{7}$–II followed by V or V$_{7}$.)
Dim. 7th on 2^{+} to III. (II°$_{7}$–III$_{6}$: III used as in Ill. 214.)
Dim. 7th on 4^{+} to V. (IV°$_{7}$–V followed by V$_{7}$, I or VI.)
Dim. 7th on 5^{+} to VI. (V°$_{7}$–VI. See Ill. 190.)
Min. key: Dim. 7th on 4^{+} to V. (IV°$_{7}$–V followed by V$_{7}$, I or VI.)

Ill. 254

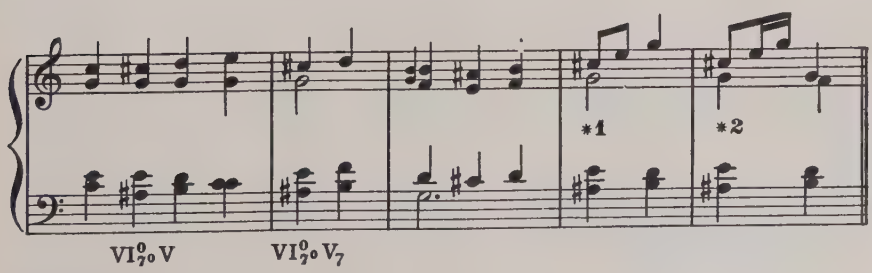


The resolutions correspond exactly with VII°$_{7}$–I. The chords immediately following are first to be reckoned with if there is any ambiguity. The status of the latter usually identifies the doubtful progression.

335. A Dim. 7th on 6^{+} (VI°$_{7}$) moving into V or V$_{7}$ is a conventional and satisfactory progression. The resolution is Passive.

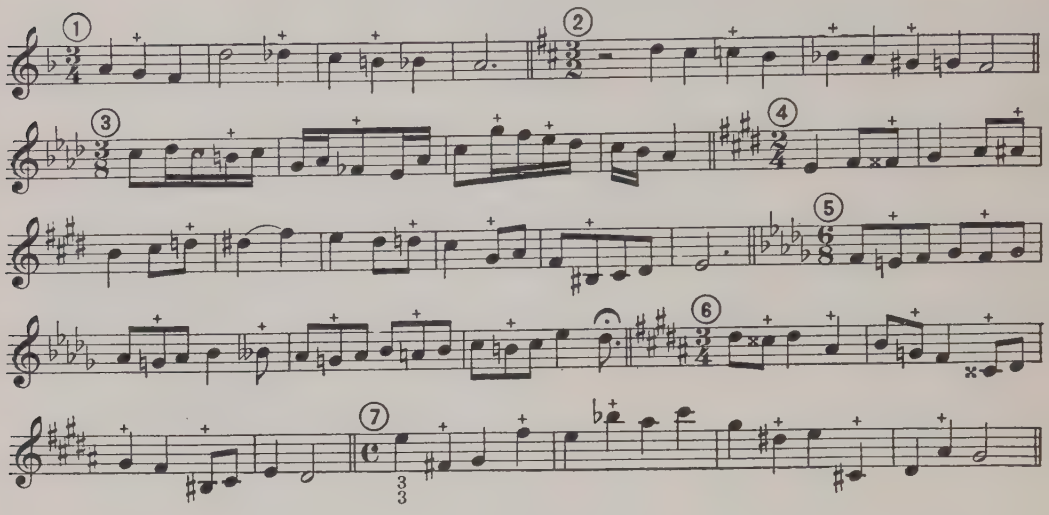
VI°$_{7}$–V$_{7}$:—7th held; other tones ascend a half-step.
VI°$_{7}$–V:—7th held; 5th descends; others ascend a half-step.

Ill. 255



The progressions at *1 and *2, while less usual, are good.

Exercise 144. These melodies admit of Dim. 7ths on the various scale degrees mentioned in this lesson. No. 7 will apply Ill. 236, Note (b)*3 and possibly *4.



LESSON 98

Successive Dim. 7ths

336. Instrumentally, any Dim. 7th may move to any other, no account being taken of voice-leading or chord-shapes. Vocally, the best successions are those with every voice moving in half-steps.

There is no et limit to the number of Dim. 7ths possible in direct succession but good judgment must be exercised to prevent monotony or banality.

337. Composers have observed little consistency in notating such successions and strict rules are impossible of deduction. The following suggestions are listed in the order of their importance. In case of conflict observe the one earlier in the list.

(a) The last Dim. 7th should be notated in the key of its resolving chord.

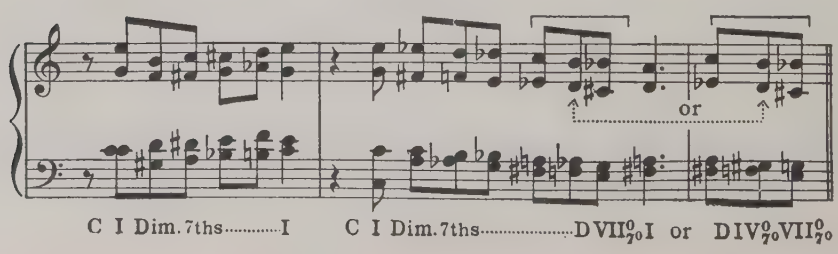
(b) Those that sound alike take the same notation.

(c) Avoid simultaneous diatonic or simultaneous chromatic movement in all four voices.

(d) All voices might follow the line of a correct chromatic scale.

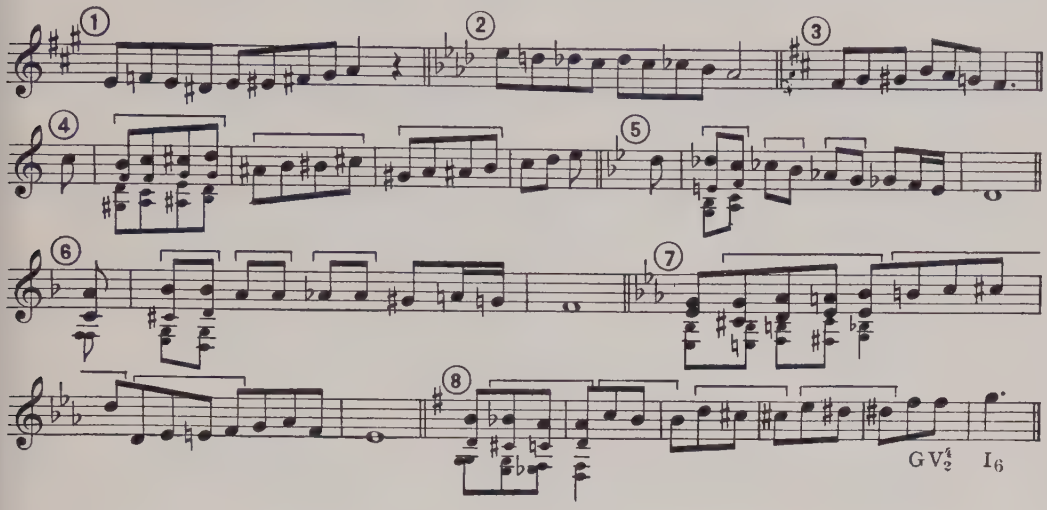
(e) The second last might be notated as a logical $II^{\circ}_{7^{\circ}}$, $IV^{\circ}_{7^{\circ}}$ or $VI^{\circ}_{7^{\circ}}$ of the key being approached.

Ill. 256



Exercise 145. Harmonize. Illustrate successive Dim. 7ths in melodies 1, 2 and 3.

The ⌐¬ indicates a pattern of a sequence.
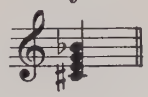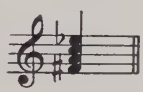


LESSON 99

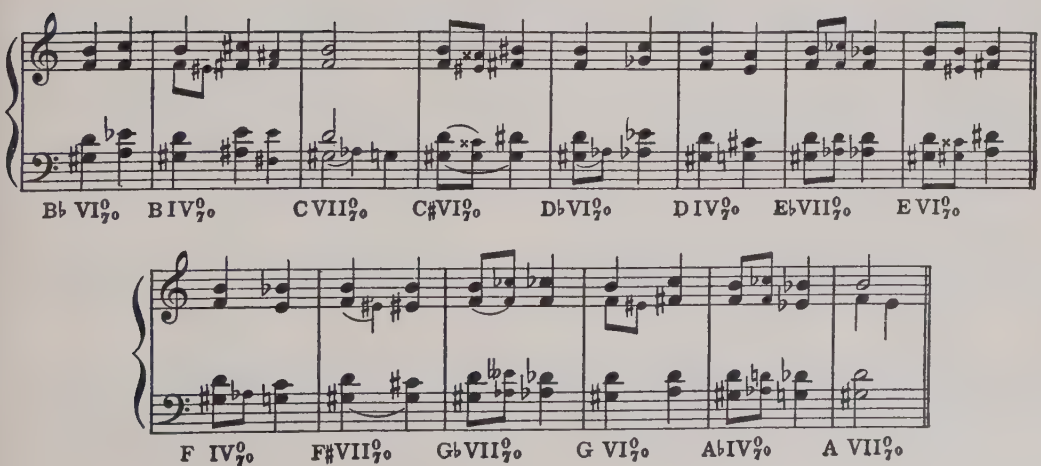
VII°$_{7°}$ TO V$_7$. SUMMARY OF PROGRESSIONS FROM VII°$_{7°}$

338. Any Dim. 7th may progress into any V$_7$, the voice-leading necessitating no leap in any voice.

The Dim. 7th, in these connections, has the character of either IV°$_{7°}$, VI°$_{7°}$ or VII°$_{7°}$. The enharmonic re-notation shown by small notes in Ill. 257 is not a practical necessity but the analysis must deduce the correct indication (IV°$_{7°}$, etc.), whether the chord is properly notated or not.

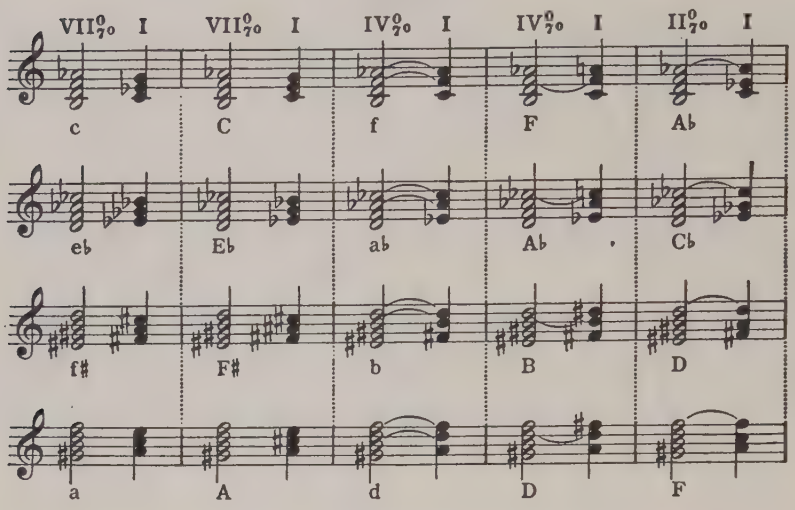
Exercise 146. Study Ill. 257 carefully. Compile two tables showing the connections of  and  in some four-part arrangement with every V$_7$.

Ill. 257

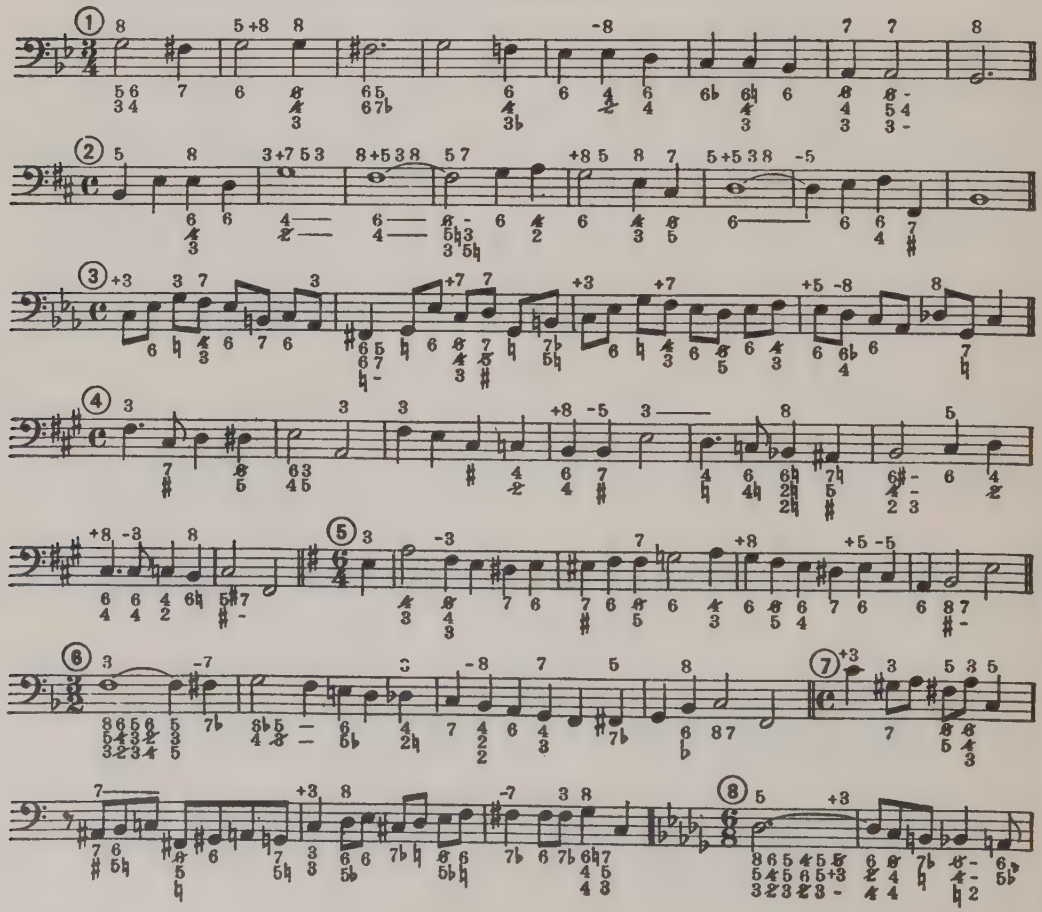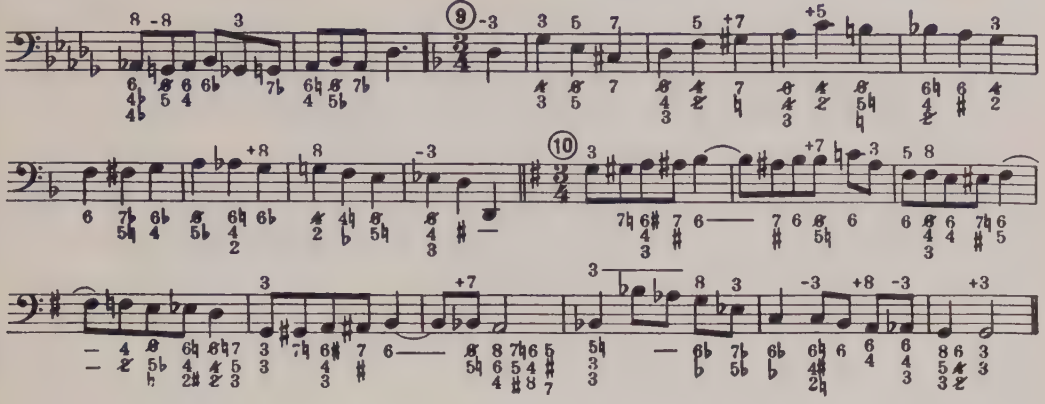


Exercise 147. Ill. 258 tabulates the more frequently used resolutions of the four enharmonic forms of one Dim. 7th. Make similar tables for the other two. (See Par. 153.)

Ill. 258



Exercise 148. Given basses illustrating the Dim. 7th.





LESSON 100

Dominant Ninth

Review Lesson 46.

339. V_9 may have its root or 7th in the bass.
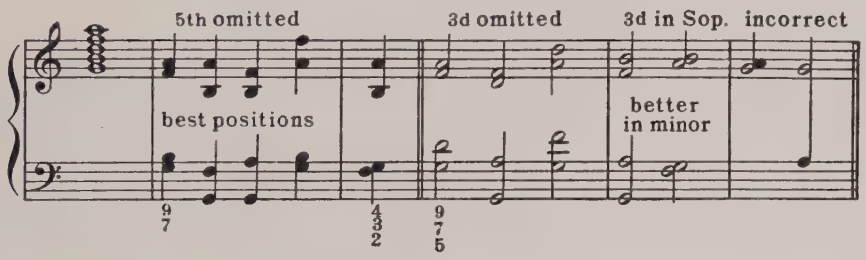
The 9th or 7th are the best Sop. tones, but the 3rd or 5th is occasionally found there.

Usually the 5th is omitted; sometimes the 3rd and most rarely the 7th.

The 9th must lie at least a ninth *higher* than the root.

Features of modern music refute these rules (and most others) but they are fundamentally good ones for the student to follow.

Ill. 259



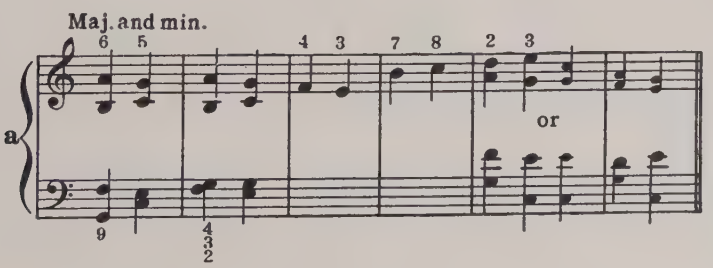
340. Regularly, V_9 resolves to I, the voice-leading being that of $VII°_7$–I and V_7–I. (Also see Par. 146.)

V_9–I^6_4 must be followed by some form of V. (See Par. 213.)

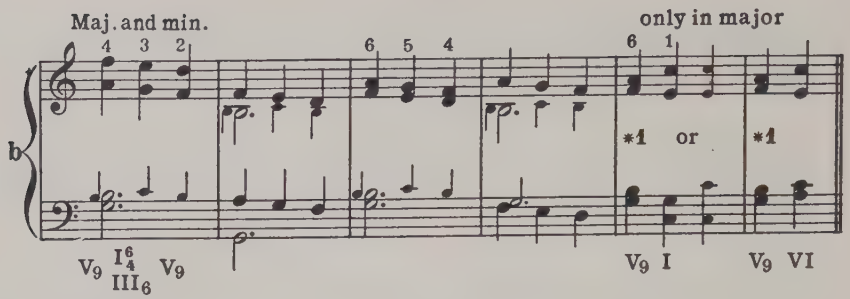
III_6 with third doubled may be substituted for the I^6_4. (See Ill. 260b.)

The ascending 9th at *1 (260b) is to be used sparingly and only in the major.

Ill. 260a

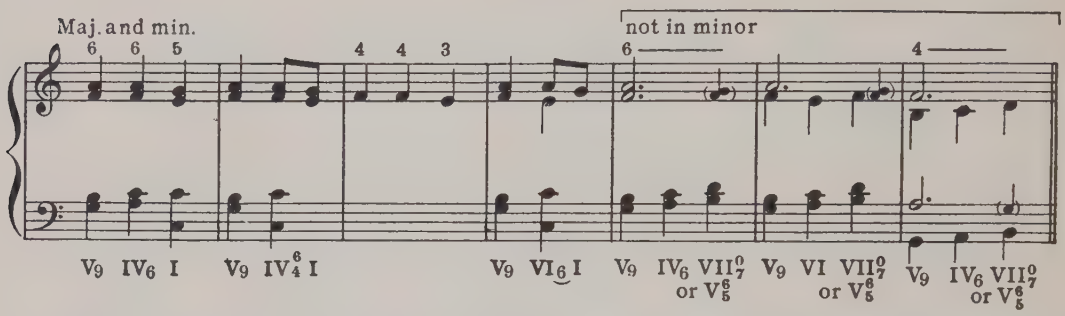


Ill. 260b



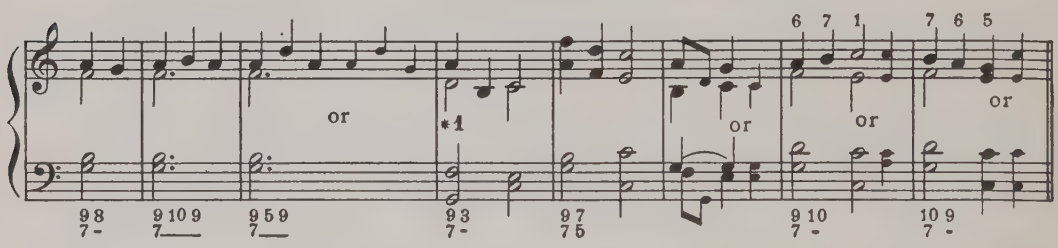
341. Passively, V_9 moves into IV_6 or IV^6_4, occasionally into VI or VI_6 but *not* into II.

Ill. 261



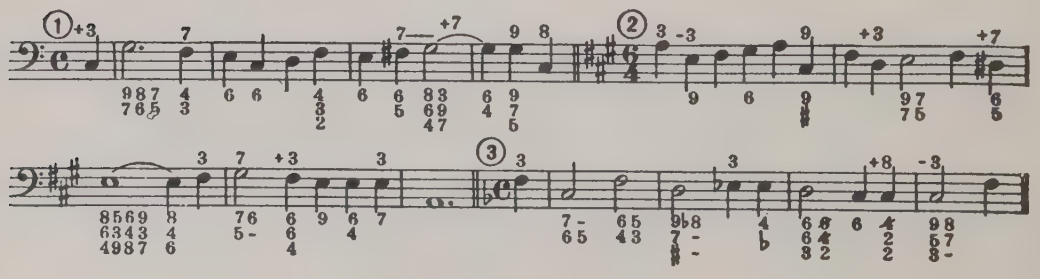
342. V_9 may be repeated in various forms or move into other parts of the dominant harmony, due attention being given to the voice-leading and the ultimate resolution of the dissonances.
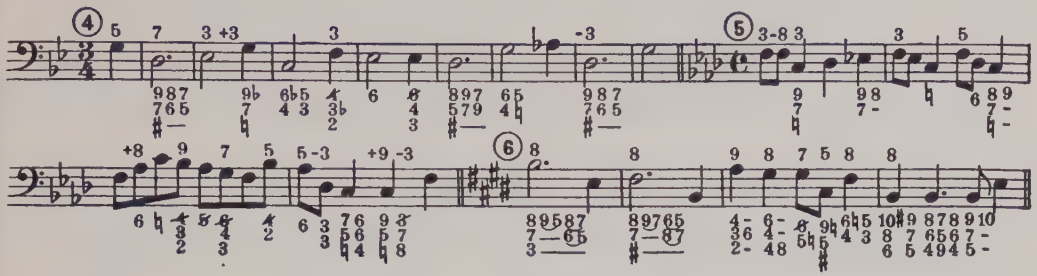
Ill. 262



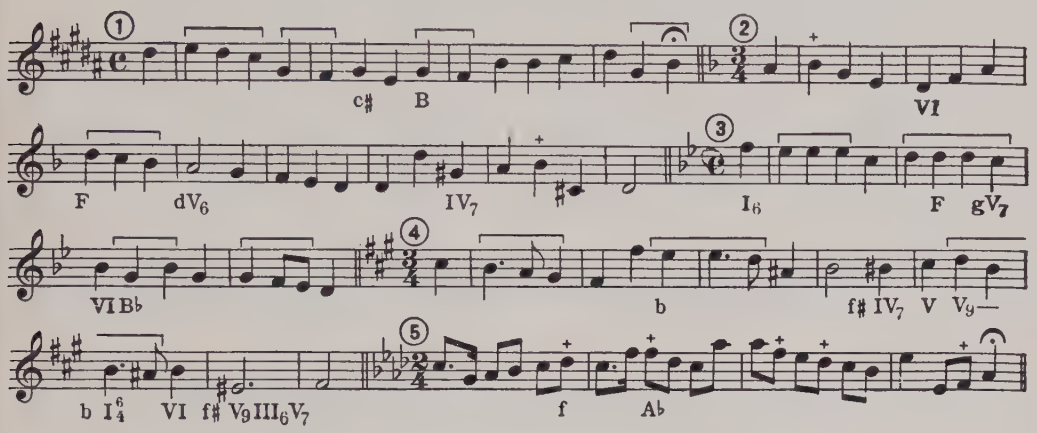
*1 The crossing of voices, though quite acceptable, is to be indulged in rarely.

Exercise 149. $\frac{9}{7}{}^{}_{3}$ or $\frac{9}{7}$ or 9 = omit 5th; $\frac{9}{7}{}^{}_{5}$ or $\frac{9}{5}$ = omit 3rd; $\frac{9}{5}{}^{}_{3}$ = omit 7th. $\frac{4}{3}{}^{}_{2}$ = 9th chord, 7th in bass. In Ex. 6, the 10 equals a 3 in $\frac{10}{8}{}^{}_{6}$.





Exercise 150. The brackets ⌐¬ indicate some lesson-pattern. The + in Ex. 2 and Ex. 5 requires a 9th chord.



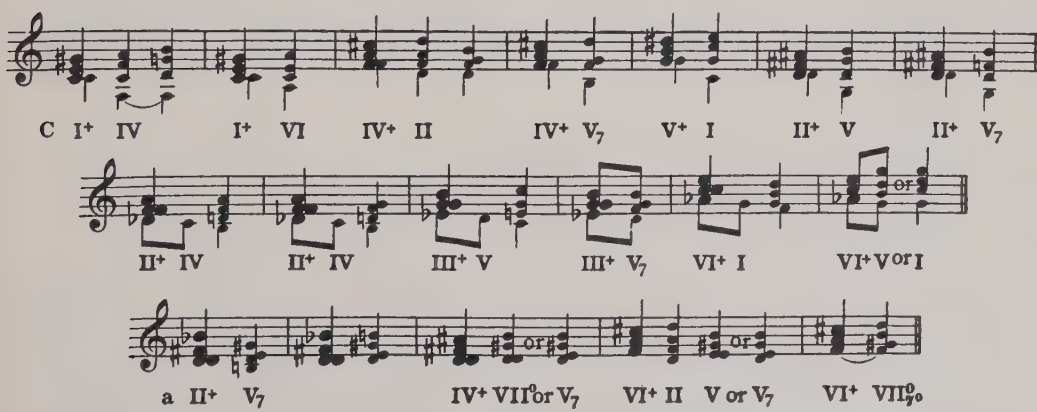
LESSON 101

The Aug. Triad

343. The Augmented triad is a diatonic chord only as III+ of the minor. (See Par. 284.) It has a more useful application as an altered major or minor triad.

In major, every triad except VII° }
In minor, II, IV and VI } may be altered into an Aug. triad.

Ill. 263



The chord following the altered chord is one that would most naturally result from the unaltered form. The alteration is simply the reduction of a whole-step progression to a half-step.

344. The best Aug. triads are I^+, IV^+ and V^+ of the major.

Any interval except the altered one may be doubled.

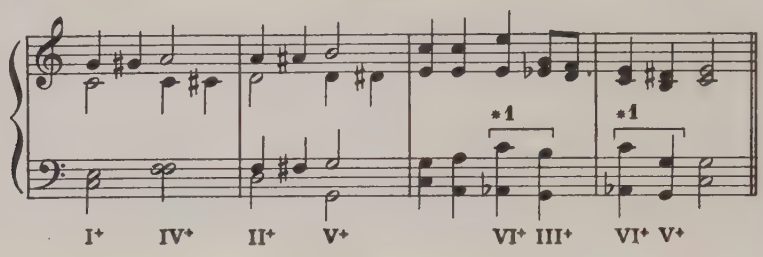
There is no choice of positions.

The altered tone may be approached diatonically, chromatically or by any well-sounding leap.

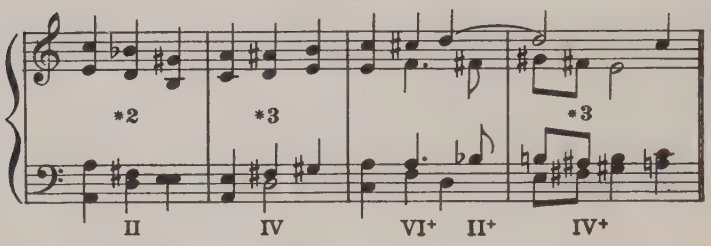
Consecutive fifths are correct between any two voices if the last is augmented and between any voices except the two outer if the first is aug. and the last perfect.

The following illustrates the use of the aug. triad within a key—without modulation.

Ill. 264a



Ill. 264b



*1 Consecutive Aug. triads. See Ill. 267.

*2 This correlates with the treatment of a N6. See Lesson 81.

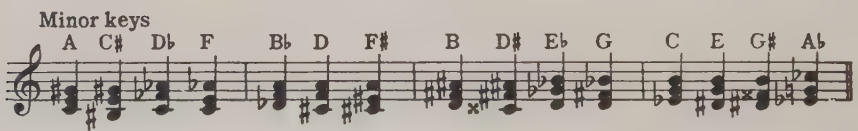
*3 Correctly notated, the A♯ would be B♭.

*1 and *3. Observe the consecutive 5ths. See Par. 344.

*2 and *3. Observe use of melodic minor.

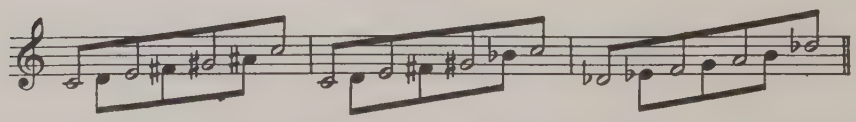
345. There are only four different augmented triads. Each is enharmonic with several others.

Ill. 265



It is the only triad found in the whole-tone scale.

Ill. 266

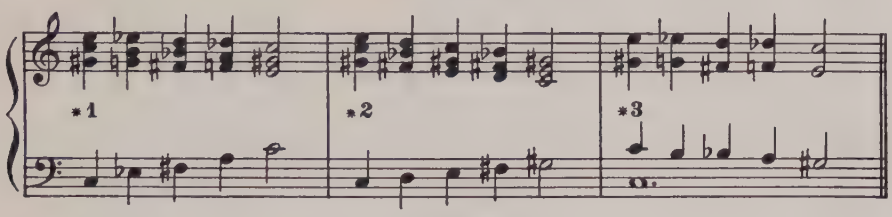


346. One aug. triad may move into any other. Usually three voices progress diatonically or chromatically in one direction while the remaining voice leads in some consistent pattern, avoiding consecutive octaves. In any voice, the leading should show deliberate purpose. Skips should be reasonably melodic. Preferably double the tones that require no particular leading or those that have several leadings. The rules of cross-relation are relaxed.

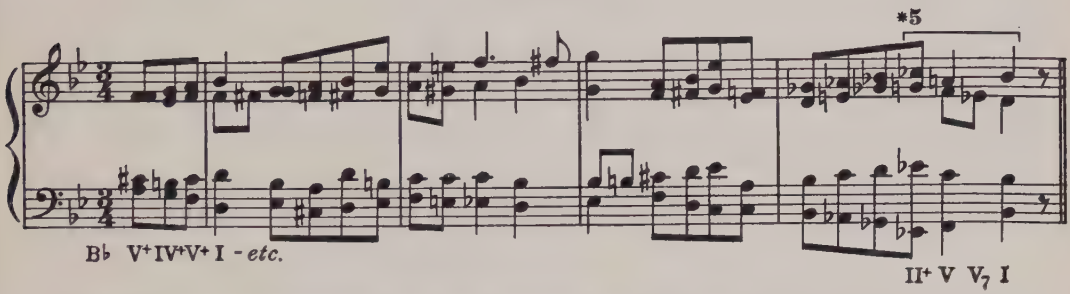
In notation, conform to the chromatic or whole-tone scale. Triads that sound alike are notated alike. The last of a group is written to move correctly into the next chord.

Analyse the illustrations of this lesson and particularly the solutions of Ex. 151.

Ill. 267a

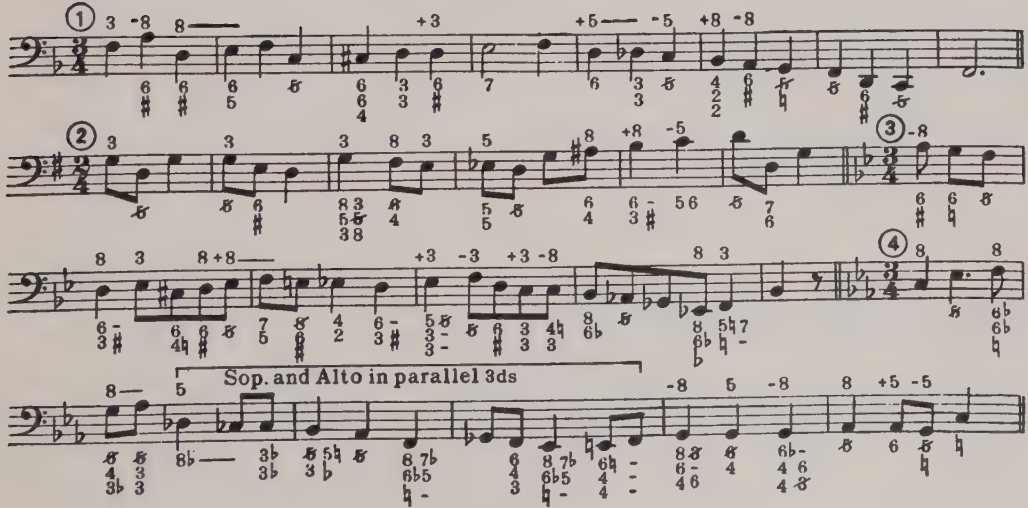


Ill. 267b

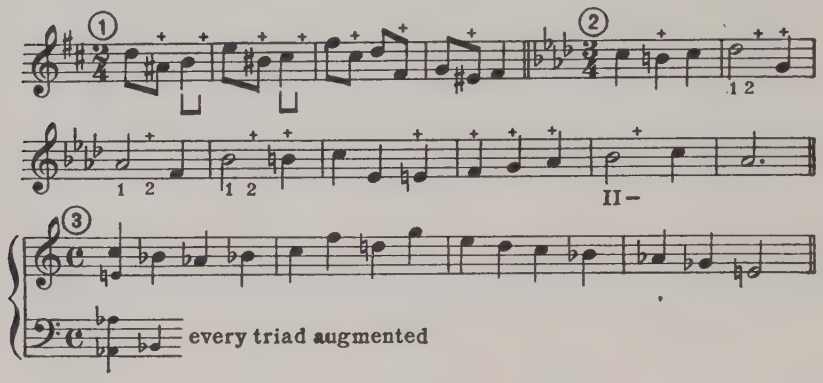


*1 In chromatic succession, the bass moving along the line of a Dim. 7th chord.
*2 All voices in whole-steps—the bass contrary to the others.
*3 Chromatic succession over an organ-point. For later reference.
When the tonality s as vague as in Ill. 267a, do not try to determine a key. Simply mark as "successive aug. triads."
*5 Compare this with the N6.

Exercise 151. Recall that a line through a figure means to raise that interval above the bass—from a natural to a sharp, from a flat to a natural, etc. Also, an accidental with no figure before it affects the 3rd above the bass. The accidentals, other than those in the signature, are in force only for the one particular chord.



Exercise 152. The half-notes of No. 2 (except the last) are each to have two chords or a chord and its alteration.



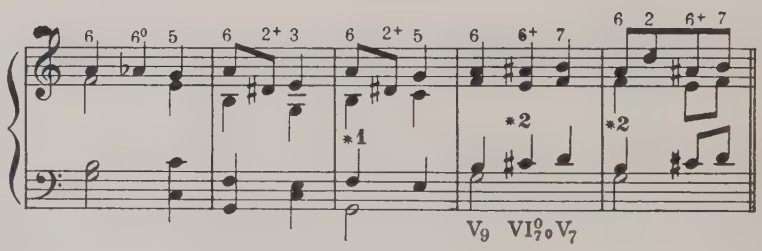
LESSON 102

Dom. 9th—Irregular Treatment

The irregular treatment of 9th chords is a complex feature of modern music. Only a few of the irregularities will be included in this text.

347. V_9 of major is subject to two alterations; the chord 9th may be lowered or the 5th raised. This happens only in the maj.

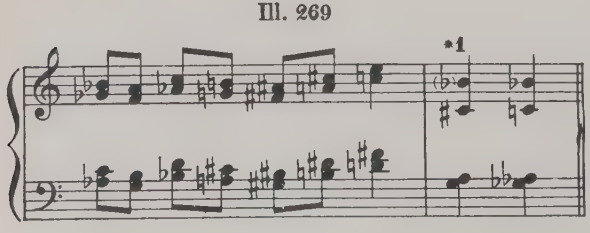
Ill. 268



*1 The altered tone skips back to the resolving tone of the chord 9th.
*2 The 9th is raised but harmonized with a $VI^{\circ}_{7^{\circ}}$.

348. Even as successive Dom. 7ths are acceptable (Lesson 89), so are successive Dom. 9ths—chromatically, diatonically and by skips, in sequence, keeping the same shape or changing to new. Rules of cross-relation, chromatic alterations, consecutive fifths and tone tendencies are relaxed but some consistent design must prevail and, except in an exercise, more than a few in direct succession become stupid. They are so easy to handle and so illusive in tonality that a sparing use will be praiseworthy from the viewpoint of restraint and harmonic strength.

Ill. 269



Maj. 9ths succeed each other better than min. 9ths and root positions better than third inversions.

*1 The min. 9th followed by a maj. 9th provides a connecting tone—(b♭). This would be difficult vocally because of the successive 2nds in the bass and tenor.

349. It is possible to lead a V_9 into the various parts of the Dom. harmony of any other key. The natural voice-leading is sustained, chromatic or diatonic.

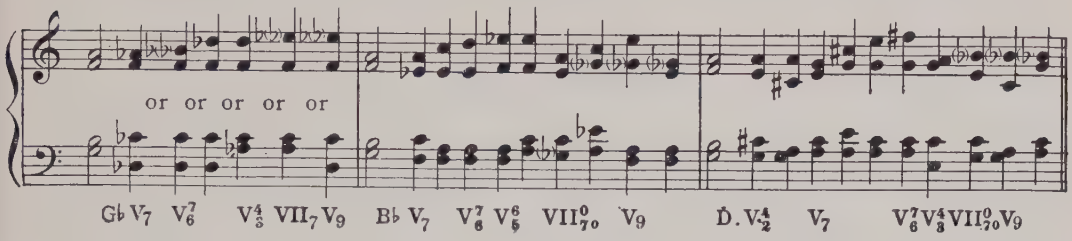
If the *Root* skips, it is usually to the root of the next chord.

If the 3rd has to skip, t ascends to 4 or 6 of the new scale.

If the 7th has to ascend one degree or skip, it moves to 4 or 7 of the new scale. Any skip from the 7th should be downward.

The 9th has all the freedom of a tone of a triad.

Ill. 270



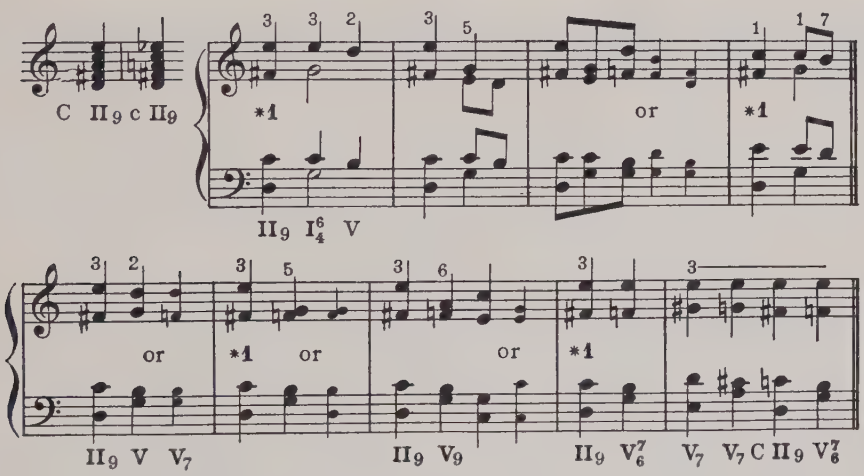
350. V_9 of one key may be used as an altered II_9 of SD. In other words, II_9 of maj. with 3rd raised or II_9 of minor with 3rd and 5th raised sounds a V_9.

As II_9 it combines the possibilities of the altered II_7 and IV_7. It resolves to V (exactly as a V_9–I) or any other part of the Dom. harmony or passively into I.

In the following, note the freedom of movement of the chord 9th.

The other intervals move strictly as in the progressions from V_7 or the altered II_7.
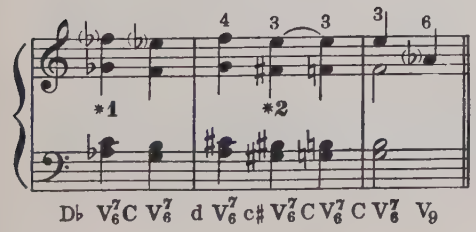
Ill. 271



*1 (Also Meas. 5) Only these measures are good in minor.

351. The following is included in this lesson because of its value in connection with V_9.

Ill. 272



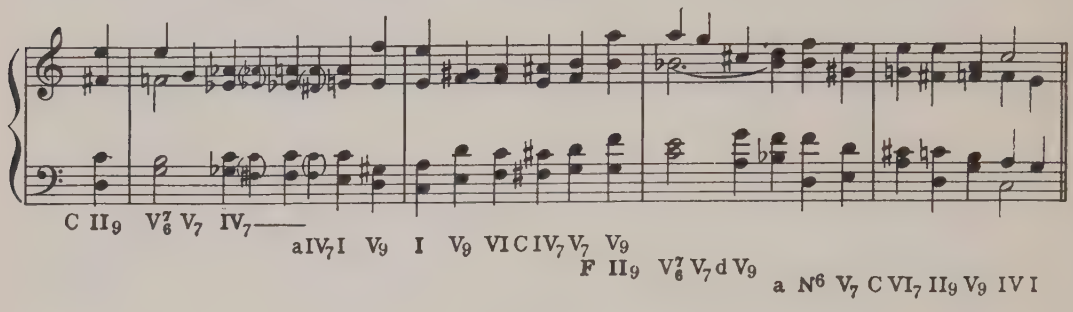
See Ill. 215 and 226. V_6^7 is actually either a V_7 with an anticipation of the 3rd of I or with an upper-neighbor substituted for the chord 5th.

Note that it consists of a root, 3rd, *6th* and 7th—and that the root is the bass and the 6th the soprano.

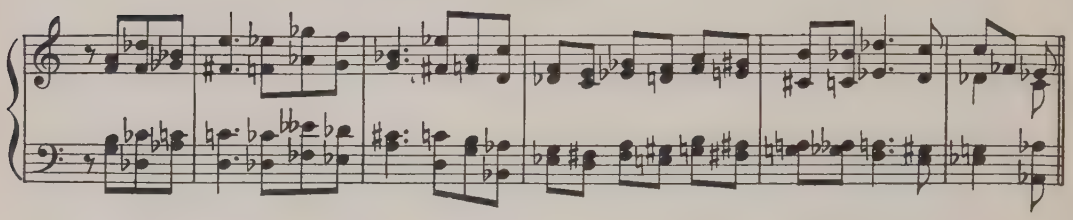
Their use in direct succession is usually limited to two, chromatically, unless a common tone can be found in the connection of a minor 6th with a major 6th. (See *2.) The chord 6th has all the freedom of movement of a tone of a triad.

352. In Ill. 273, the uses of the more illusive chords are logical and reasonable while in Ill. 274 only a definite and consistent purpose throughout could justify the extreme irregularities.

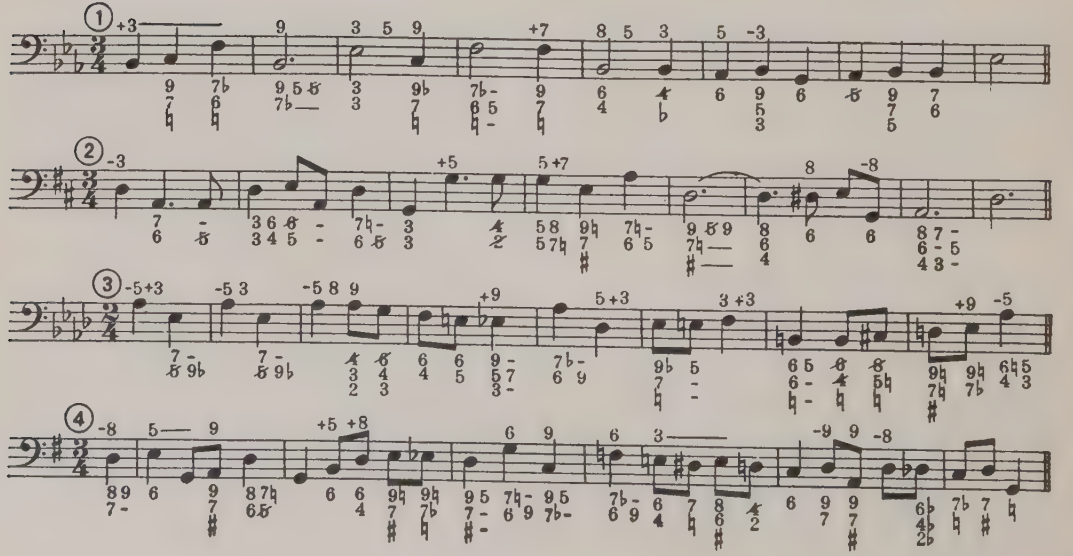
Ill. 273
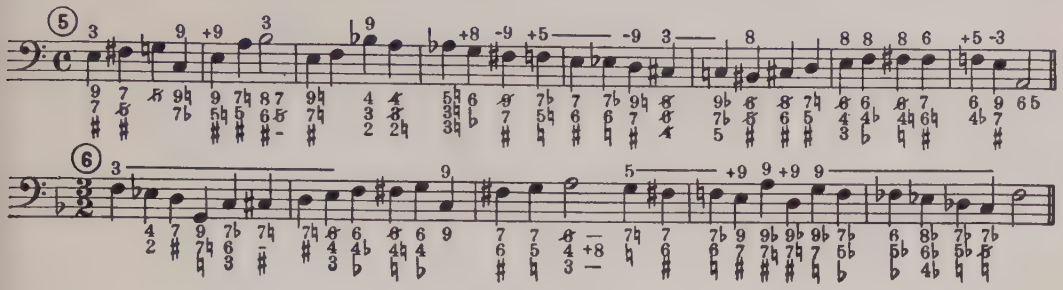


Ill. 274



Exercise 153. The complex figuration is unavoidable and demands extreme care in the calculation of intervals. The last two or three basses may be reserved for a later review which should cover the entire text.





LESSON 103

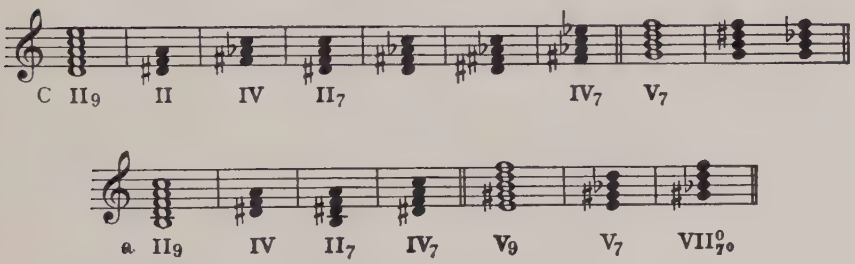
Aug. 6th Chords

353. By legitimate alteration most of the triads and 7th chords can be made to contain a dim. 3rd, which interval, inverted, becomes an aug. 6th.

The most useful are the altered forms of the various parts of II_9 and V_9 containing the altered steps.

2^+, $2°$, 4^+, $6°$ or $3°$ of the maj. key and
2^+ and $2°$ of the min. key.

Ill. 275



354. (a) The first and second inversions of II_7 and IV_7 are best. The third inversion is least good.

(b) The first inversion of the altered II or IV is best.

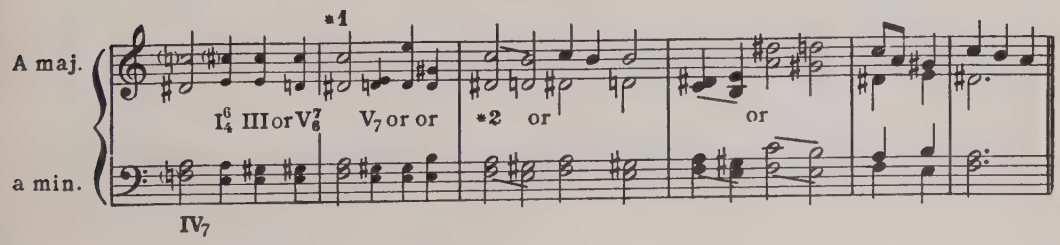
(c) V_7 containing 2^+ should have that tone in the sop.
V_7 containing $2°$ should have that tone in the bass.

(d) The shapes of the Aug. 6th chords which invert the original dim. 3rd to an aug. 6th are strongest. If the dim. 3rd is allowed to appear the tones forming the interval must be at least a 10th apart.

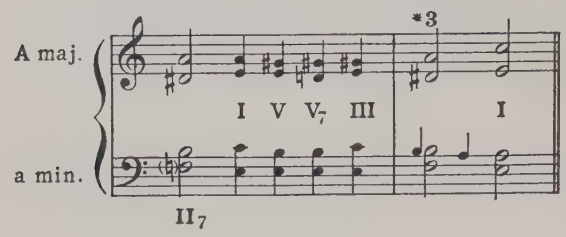
(e) The interval of an aug. 6th expands to an octave or both tones descend to the root and 7th of V_7. The resolving chord will be I or part of V_9.

The conventional resolutions are detailed in the following illustrations.

Ill. 276a



Ill. 276b



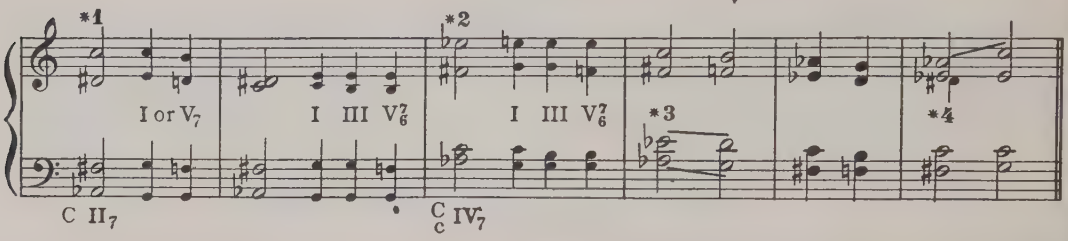
The accidentals in parentheses are for A major.

*1 The chord 7th, being the scale-tonic and inactive, occasionally evades a resolution.

*2 The cons. 5ths are improved by resolving the 7th first or by allowing them to occur between some voices not including the sop.

*3 The chord 7th occurs as the root of the resolving chord in the tenor. This is sufficient resolution.

Ill. 277

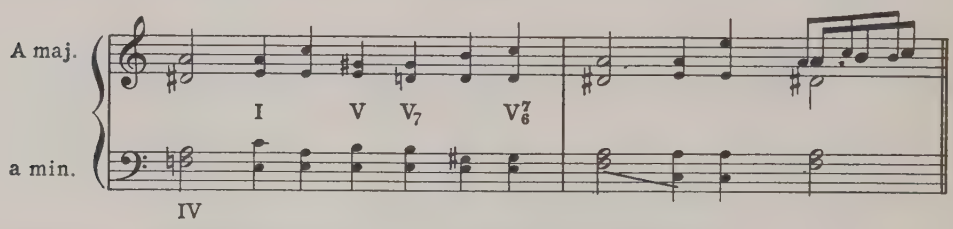


*1 and *2 Compare the two notations. That of *2, while technically incorrect, is justified by classic precedent.

*3 The con. 5ths move in half-steps and are acceptable.

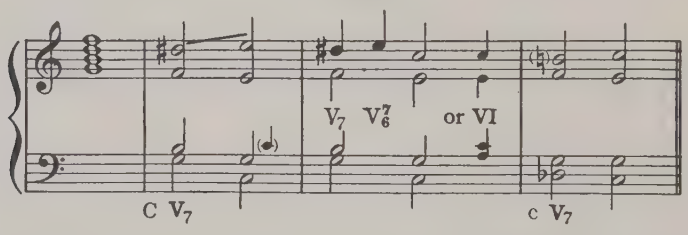
*4. Irregular but good.

Ill. 278



This triad is an abbreviated form of the chord shown in Ill. 276a.

Ill. 279



355. Names, more or less obsolete but convenient for purposes of classification, have been given these chords—each name consistent with the conventional shape and position of its chord but inconsistent with the freedom now accorded it.

(a) Triad with Dim. 3d–Dim. 5th . . . . . = Aug. 6th (Ill. 278).

(b) 7th chord with Dim. 3d–Dim. 5th–Dim. 7th . . . . . = Aug. 6–5 (Ill. 276a).
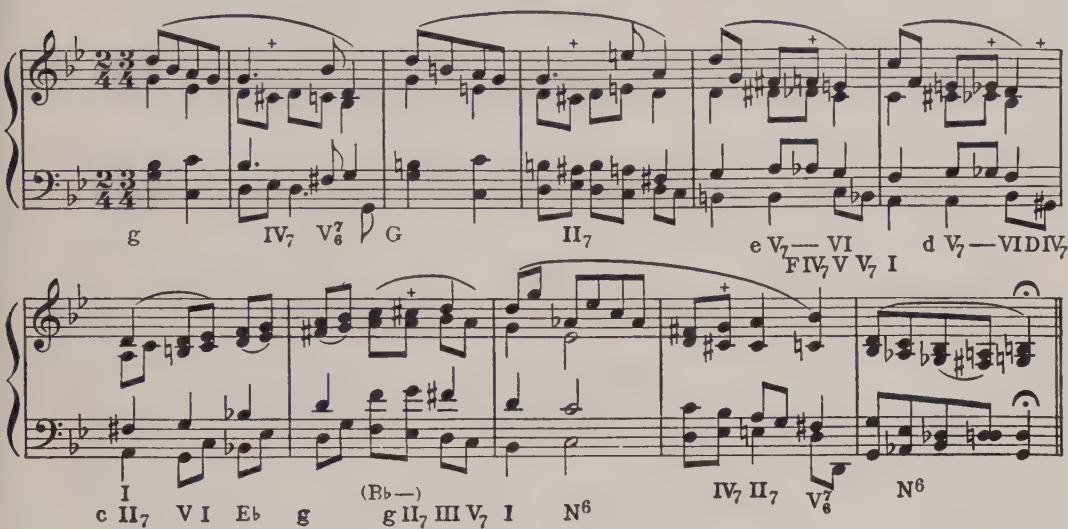
(c) 7th chord with Min. 3rd–Doub. Dim. 5th–Dim. 7th = Doub. Aug. 4–3 (Ill. 277 *1).

(d) 7th chord with Maj. 3rd–Dim. 5th–Min. 7th . . . . . = Aug. 6–4–3. (Ill 276b).

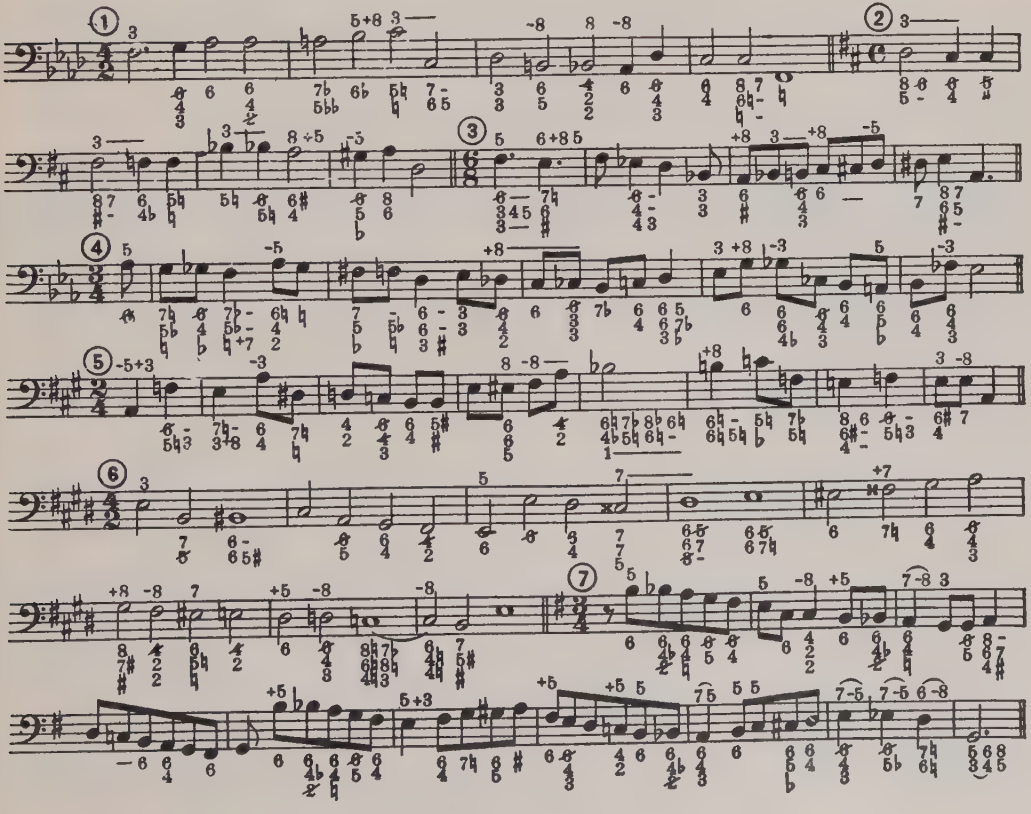
The first three are enharmonic with V_7 and occasionally take the more convenient notation, especially if the V_7 belongs to the key being quitted. *When so written, the note appearing as the chord 7th resolves by ascending a half-step.*

A complete exercise follows. Copy the bass alone and supply all indications necessary to make of it a "given bass." Do this with other complete illustrations of this text.

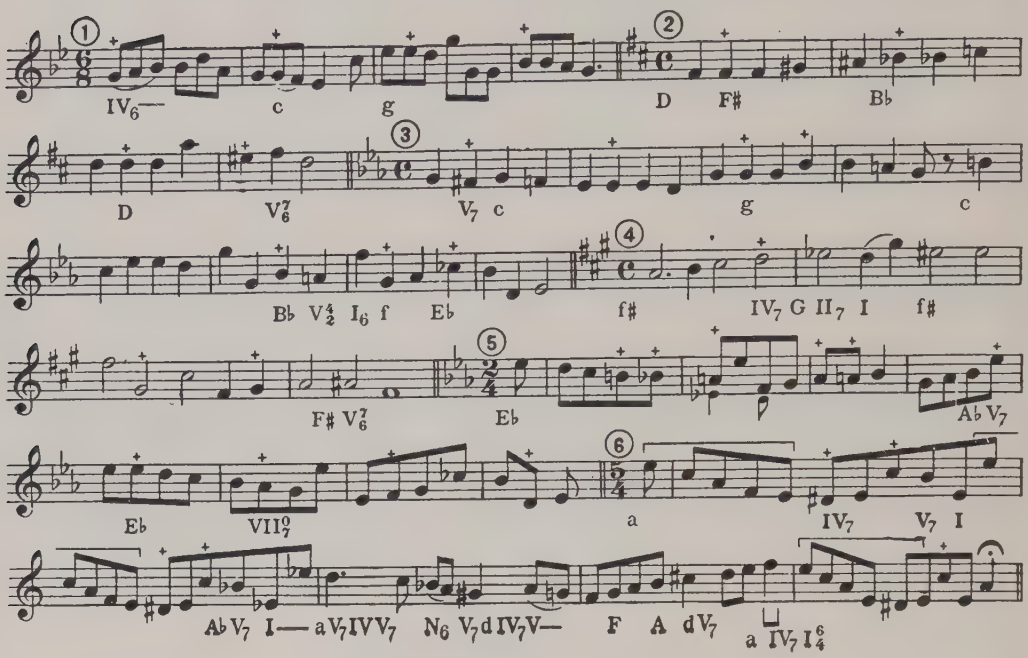
Ill. 280



Exercise 154. Aug. 6th chords with given bass.



Exercise 155. Aug. 6th chords are called for at places marked. In No. 6 do not harmonize the notes under the brackets, supply rests in the lower three voices.



LESSON 104

II_7 (Unaltered) Active Resolution

356. II_7 as an altered chord has appeared in previous lessons. As an unaltered chord its treatment corresponds very much to that of V_7. The main distinction is that the chord 7th of II_7 is an inactive scale-step which makes the passive resolution more usual than the active. Also, scale degree 4 which is the chord 7th of V_7 is the chord 3rd of II_7.

Any interval of II_7 may be in the bass. The root position and first inversion are more common.

If the root is in the bass, it may be doubled. Otherwise no interval is doubled or omitted.

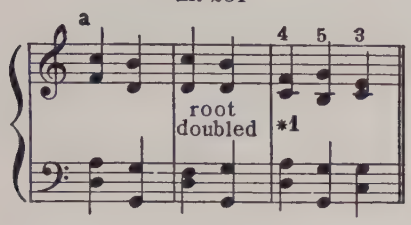
357. It resolves actively into parts of V_9, more often to V_7 or V.

II_7 to V or V_7	II_7 to VII°	II_7 to VII°$_7$	II_7 to V_9
Root holds or skips to root of $V_{(7)}$.	Possible if root of II_7 is in bass and root doubled.	Possible if root of II_7 is *not* doubled.	Possible if root or 3rd of II_7 is in bass and 3rd or 5th in Sop.
5th and 7th descend one degree.	All intervals of II_7 hold, except chord 7th which descends one degree.		3rd and 5th of II_7 hold.
3rd moves to needed tone of $V_{(7)}$ (down a third, up one degree or retained as 7th of V_7).			Root skips to root of V_9.
			7th descends one degree.
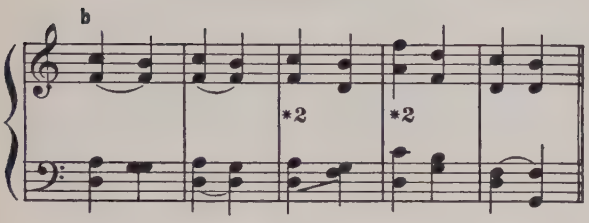
Exceptions as in illustrations.

358. II_7 combines II and IV. The voice movements in II_7–$V_{(7)}$ are practically the same as those of II–$V_{(7)}$ and IV–$V_{(7)}$ combined.

Ill. 281



Ill. 282
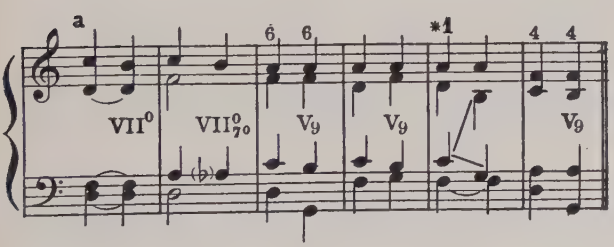


These are all equally good in minor. All voice movements are interchangeable—any leading could occur in any of the four voices.

*1 Scale-tone 4, as the Sop. of II_7, tends to descend. Here it first ascends to 5 and then completes its progression to 3.

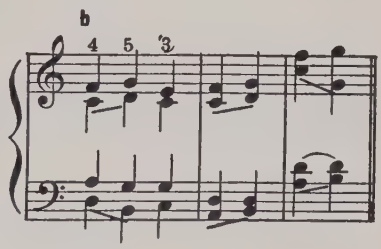
*2 Observe the irregular—but acceptable—voice-leadings and compare with those suggested by the chart in Par. 357.

Ill. 283



All good in minor. Voice-leadings interchangeable for first three measures only.

*1 Chord 7th resolved by alto taking the expected "b" in proper register.



Only Meas. 1 good in minor.

If root or 5th of II_7 moves to scale-tone 7, the chord 7th will have to lead into the root or 5th of V. These are rare but acceptable.

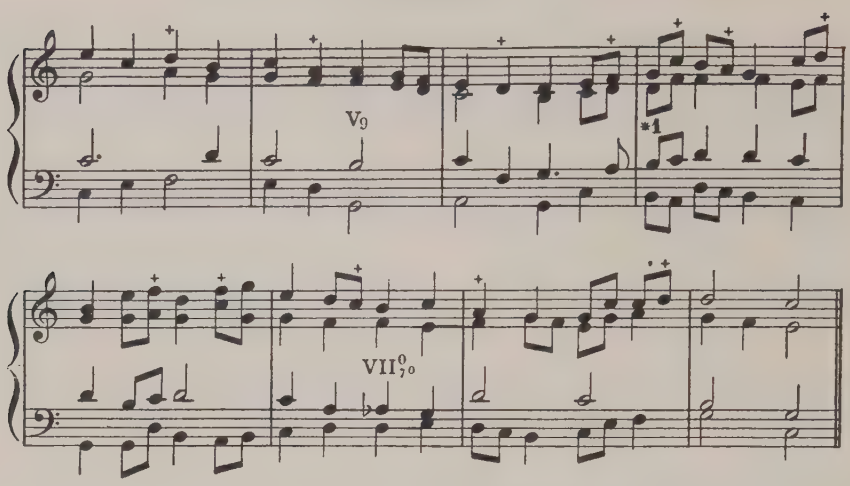
359. From the illustrations may be deduced the melodic leadings:

1.7: 6.5: 4.2: 2.5: 2.2: 4.4: 6.4: 6.6: 4.5.3:

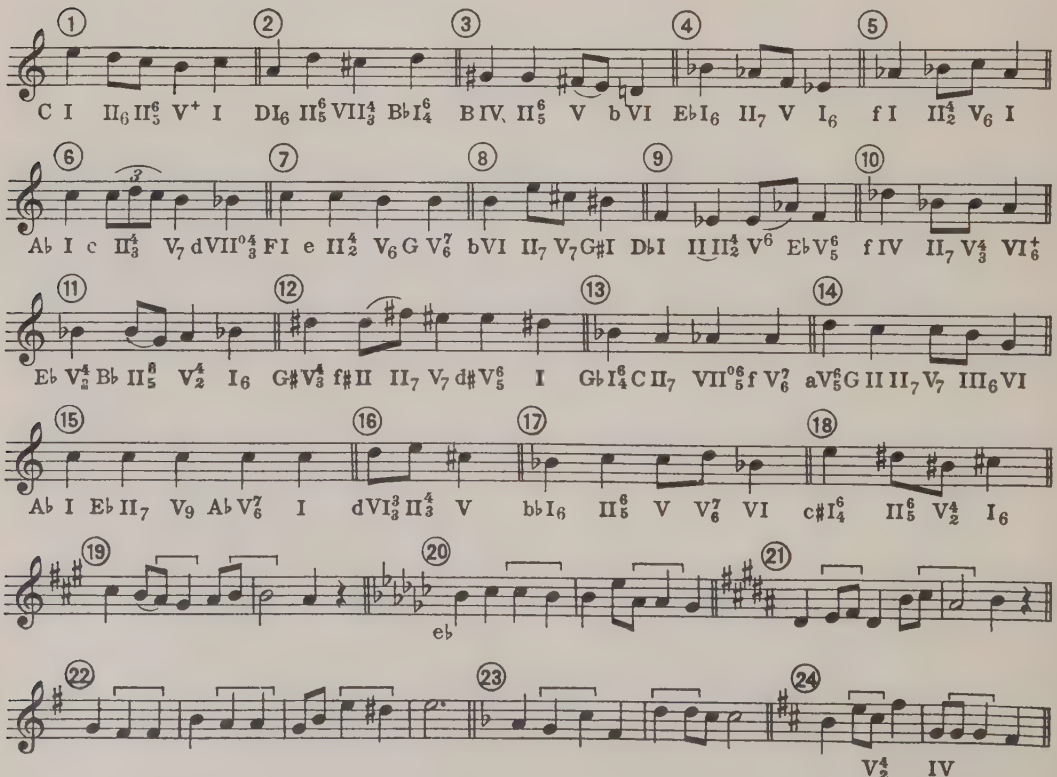
These patterns admit of II_7 to some part of V_9 provided the melody-tone immediately following permits a proper progression of the V.

Analyse the following complete exercise for uses of II_7.

Ill. 284



Exercise 156. Melodic fragments requiring a use of II_7. Some are incomplete, requiring more chords to end the musical expression. Add these chords.
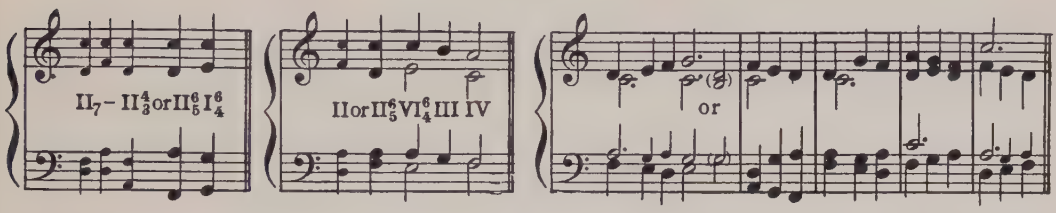


LESSON 105

II_7. Passive Resolution

360. It has been mentioned that the peculiarity of II_7 lies in the fact that the chord 7th is the scale Tonic—the only point of absolute rest in the scale. Its scale character over-balances its quality as chord 7th and tends to make the passive resolution (into I or VI) more natural than the active resolution and to justify many irregularities found in musical scores and in occasional illustrations of this text.

Conventional passive connections, comparing with those of Lesson 88, are:
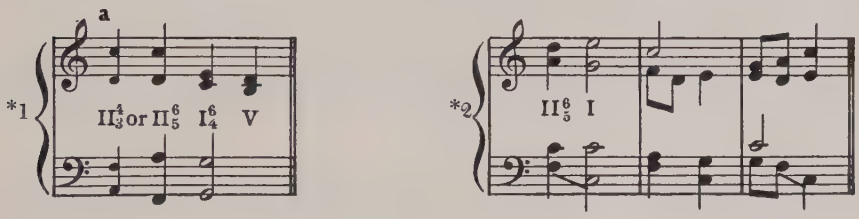
Ill. 285



The voice-leadings are interchangeable except that the sustained tone is least good in the bass. All the above are good in minor.

The following are irregular but not infrequently found.

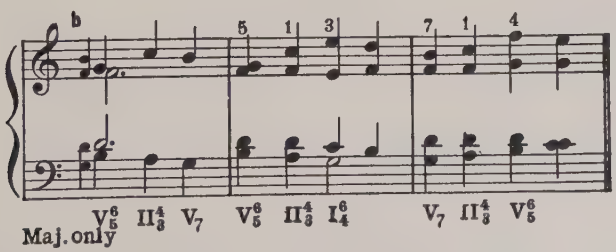
Ill. 286a



*1 The chord 7th, c, skips down to the 3rd of I but a resolution is effected by the alto taking c down to b in the last two chords.

*2 II_7–I, the bass skipping to the scale-tonic, is a form of the Plagal Cadence.

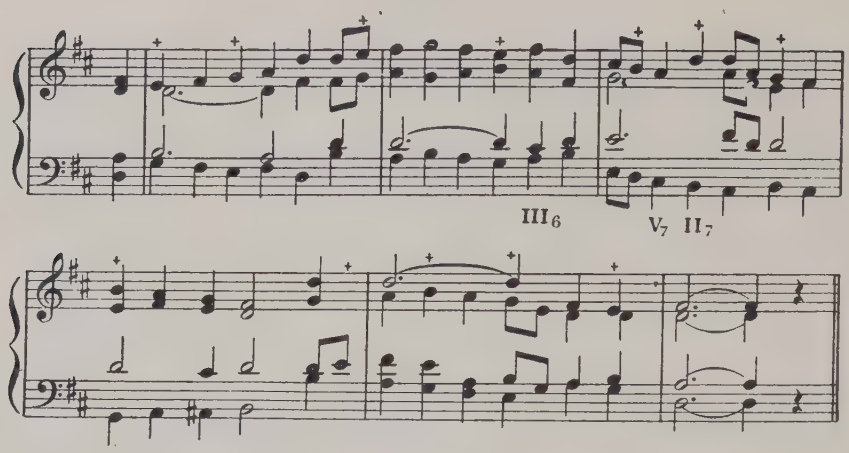
Ill. 286b



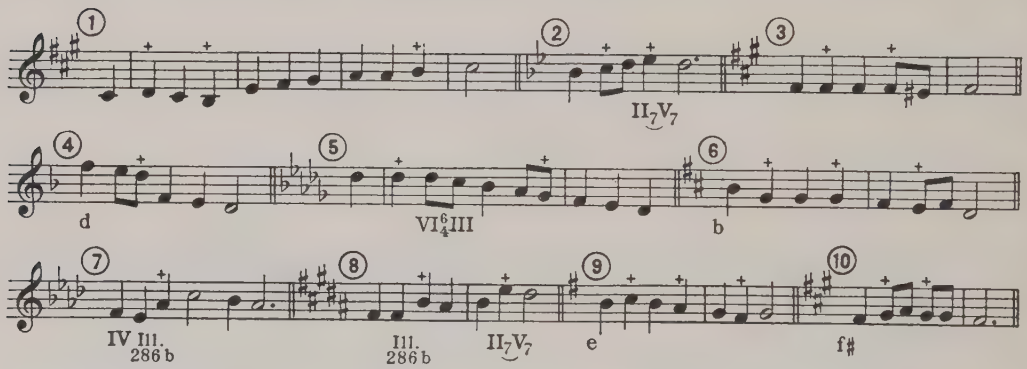
The irregularities of the last two measures are explained by Ill. 276, *1 and *3. These two measures are not satisfactory models for the student as too many elusive factors enter into any effort made to emulate them. Meas. 1 is more logical.

Analyse the following complete exercise.

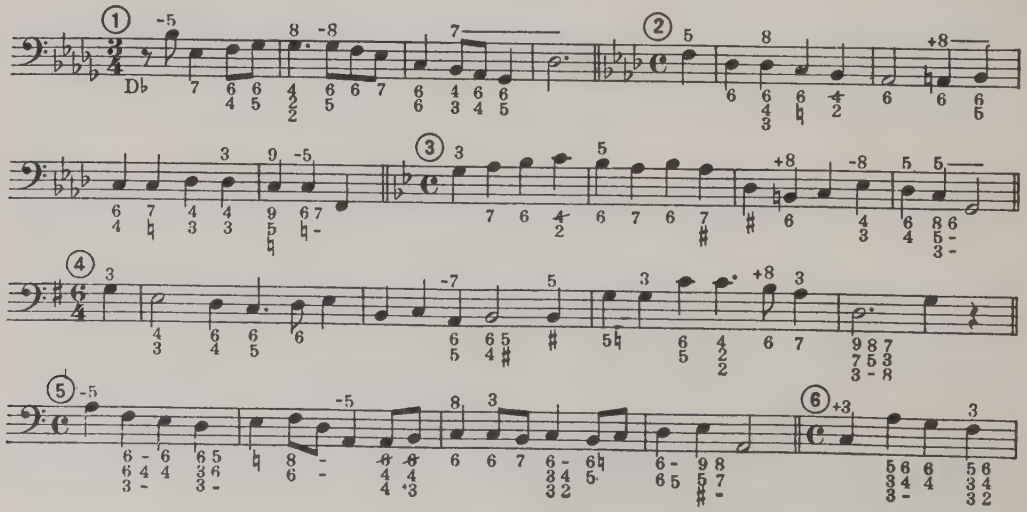
Ill. 287
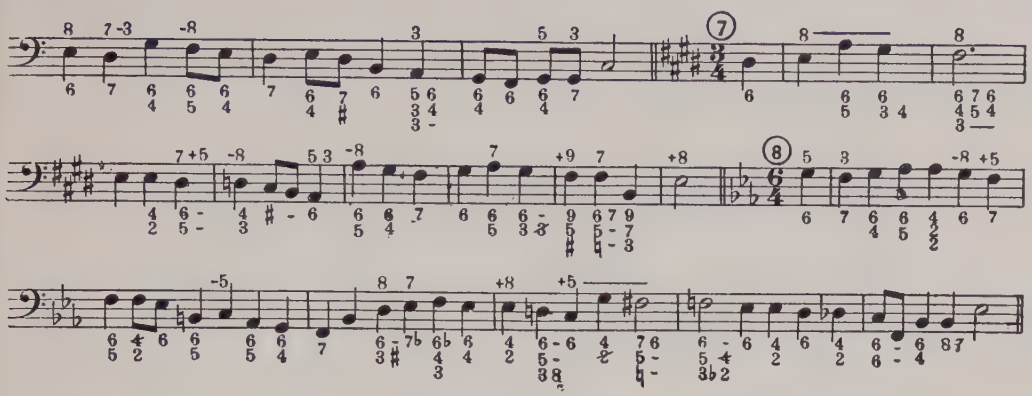


Exercise 157. Melodic fragments to be harmonized with chord-groups from Lesson 105.
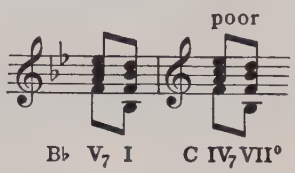


Exercise 158. Given basses illustrating both Lesson 104 and Lesson 105.





LESSON 106

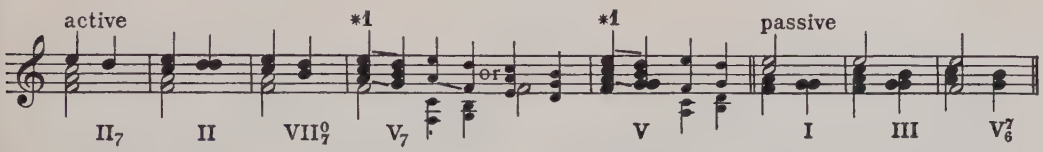
IV_7



361. IV_7 cannot use the so-called regular or normal resolution—into the triad whose root is a 5th lower than the root of the 7th chord.
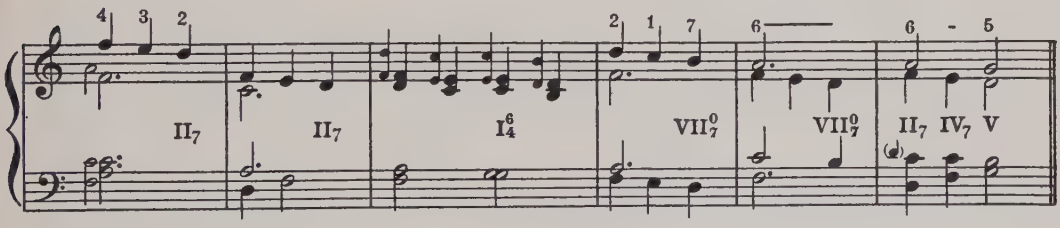
The conventional resolutions are appended. Consecutive fifths are liable to result from leading into V or V_7 as at *1. Observe the corrections printed in small notes.

Ill. 288

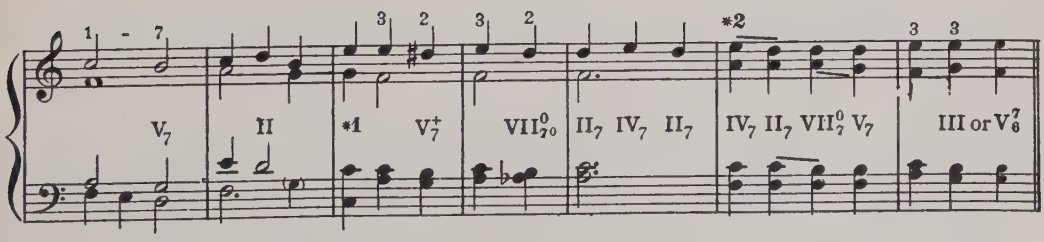


362. The relative harshness of IV_7 (especially in major) makes it advisable to either prepare the chord 7th or lead into it diatonically; the 7th is treated like a passing-tone or suspension. Skips to it may be made from other of its own chord intervals.

Ill. 289



Ill. 290

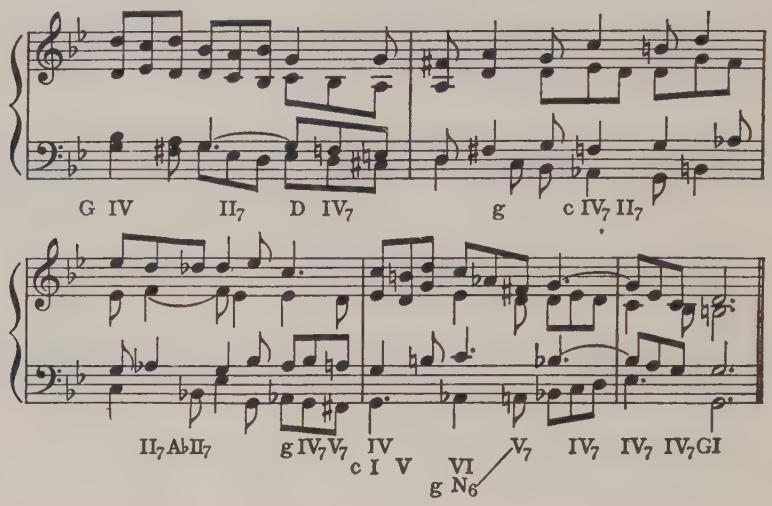


*1 This is not applicable to the minor—all other measures are.

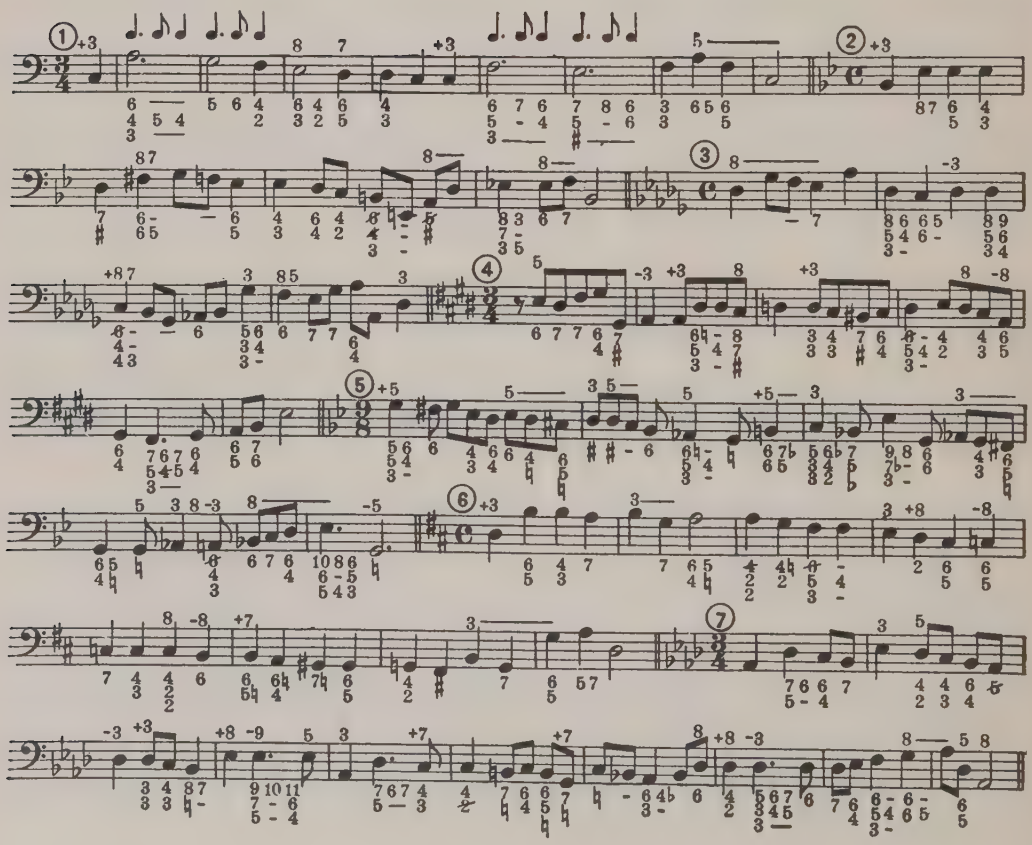
*2 Successive 7th chords are more fully treated in Lesson 107. Here, a new 7th chord results from the lone movement of each chord 7th.

In the following complete exercise, particularly note the use of II_7 and IV_7 in modulation, the first chord of the new key, in several places, being one of these two.

Ill. 291



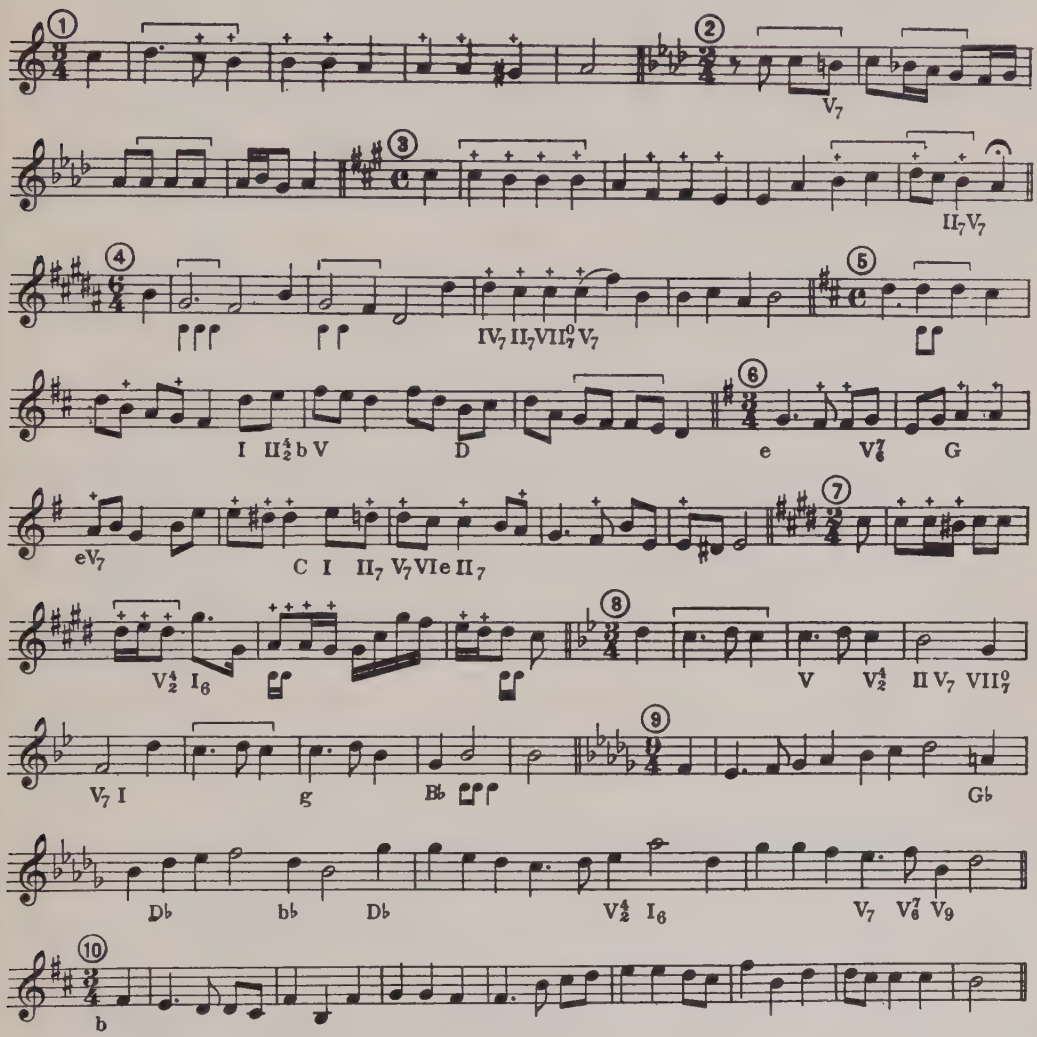
Exercise 159.



Exercise 160. Melodies to be harmonized.

The bracket over a group of notes refers to some lesson-pattern. The symbol + indicates the use of a 7th chord (II_7, IV_7, $VII°_7$, V_7).

The Roman numerals designating specific chords do not dictate a particular bass unless the inversion figures follow—as V^4_2.



LESSON 107

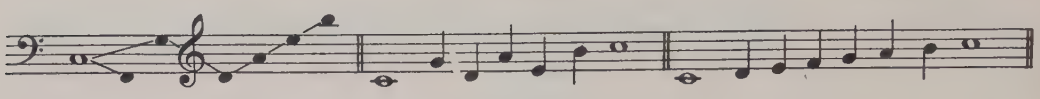
All 7th Chords of Major

363. The writer of this text accepts the principles of chord relation evolved by Percy Goetschius and detailed by him in several of his notable books on musical theory. A brief summary of these principles follows:

The fundamental interval in musical sound is the Per. 5th (called a "Harmonic Degree").

The major scale is the result of assembling within the limits of an octave five per. 5ths above and one below a key-tone.

Ill. 292

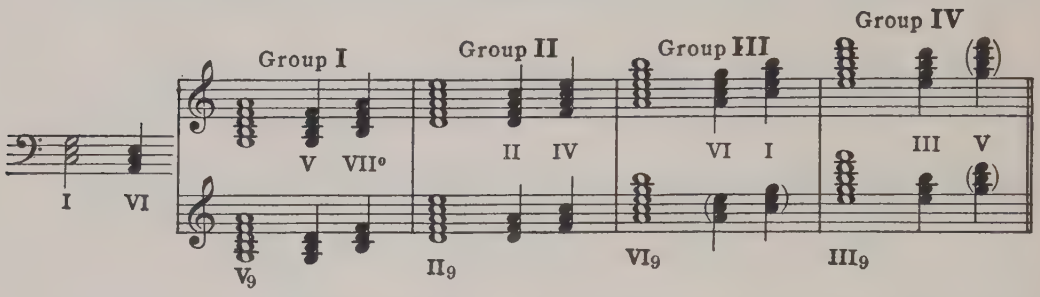


The key-tone—or Tonic—is the only point of absolute rest in the scale and the Tonic Triad (with its substitute, VI) the chord towards which all others tend.

The remaining chords are selected from four large bodies called 9th chords, built on four successive Harmonic Degrees above the scale Tonic.

Each 9th chord contains two triads and two seventh chords.

Ill. 293



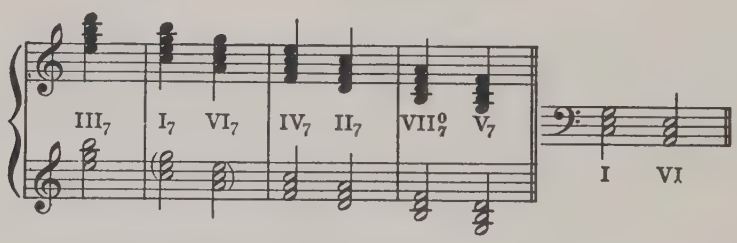
The reason for the association of triads—II with IV, VI with I, III with V—is evident in the above.

Because I and VI more clearly represent the Tonic element than the Sub. Med., they are removed from Group 3. And because V and V^7 are first heard in Group 1, they are eliminated from Group 4. The fact that V_7 begins and ends the groupings suggests the logic of the classification.

364. The usefulness of a chord decreases in proportion to its distance from the Tonic element. The farther away from that center, the harsher the sound, the stronger the urge back towards the tonic and the stricter the treatment of the dissonances in the group.

Rearranged according to the natural chord movement, Ill. 293 may be simplified as follows:

Ill. 294
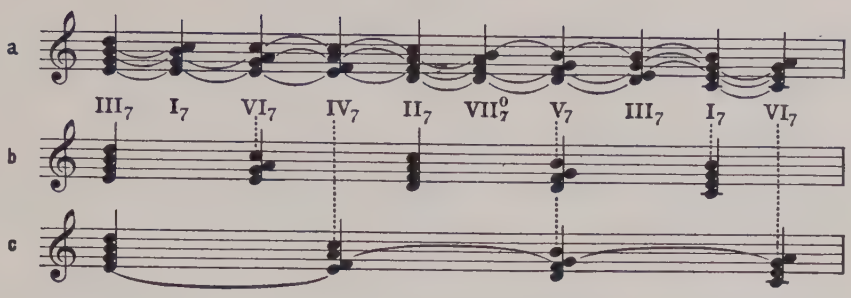


In active resolution, each 7th chord moves to the chords one, two or three places nearer the Tonic (to the right).

In passive resolution, each 7th chord moves one, two or three places farther way from the Tonic (to the left).

Considering the illustration physically, I and VI are at the bottom of a grade—a hill. The chords higher on the hill tend to move lower—to actively resolve. A passive resolution takes them to a higher grade with a resulting increase in "gravity pull," drawing them back to the place left or to a still lower one. (Recall V_7–II–V_7 and V_7–IV–V_7.)
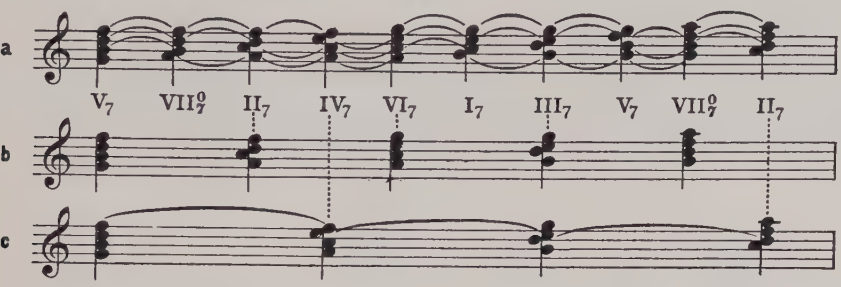
The following summarizes the possibilities of voice-leading in successions of 7th chords.

Ill. 295



(a) Chord 7th down; other tones held. (One place down. Ill. 294.)
(b) 7th and 5th down; others held. (Two places down.)
(c) 7th, 3rd and 5th down; root held. (Three places down. Cons. 5ths avoided when chords are inverted.)

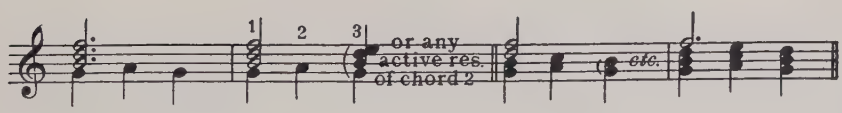
Ill. 296



(a) Root ascends; others held. (One place up. Ill. 294.)
(b) Root and 3rd up; others held. (Two places up.)
(c) Root, 3rd and 5th up; others held. (Three places up. Cons. 5ths avoided by inverting chords.)

365. (a) The passive resolutions seldom occur in the sequences shown above. More often, a passive resolution of one 7th chord into another is followed by a recurrence of the first or an active resolution of the second.

Ill. 297



(b) The most natural and satisfactory succession of 7th chords occurs when one moves to another whose root is a perfect 5th lower.
(c) The least satisfactory is from one to another on an adjacent scale degree.
(d) It is usually altogether wrong to resolve the 7th of one chord to the 7th of the next.
(e) In any succession of 7th chords the only chord interval likely to skip is the root of one chord to the root of the next.

366. The peculiarities of successive fundamental positions are illustrated below, observe:

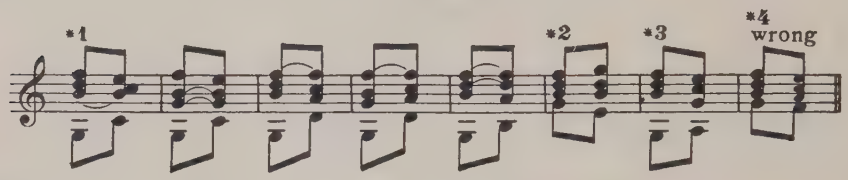
*1 With root rising a 4th or descending a 5th, the root is doubled and chord 5th omitted in alternate chords.

*2 With root descending a 3rd or ascending a 6th, the chord 7th must ascend one degree. (Compare Ill. 283b and Par. 298.)

*3 With root ascending a degree, the chord 3rd descends a 3rd.

*4 Root descending one degree—seldom possible. (Par. 365d.)

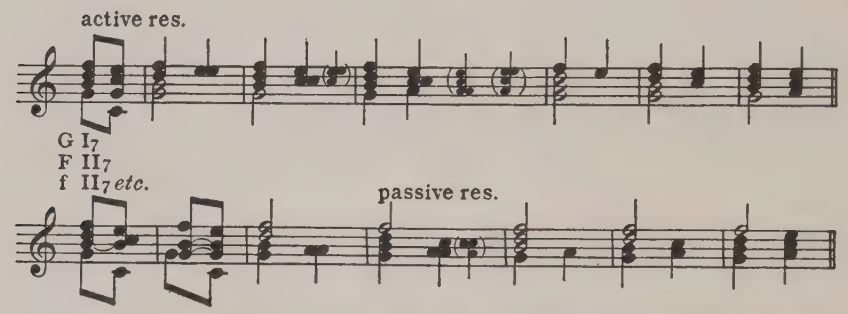
Ill. 298



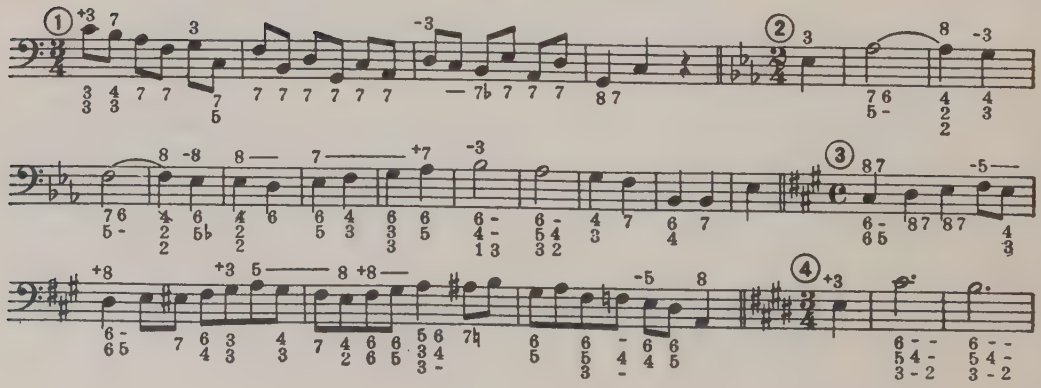
367. VI_7, I_7 and III_7 are not distinctive enough to need special consideration. They are subject to the same general rules as II_7 and IV_7 but are used very rarely, and then usually in strict fashion.
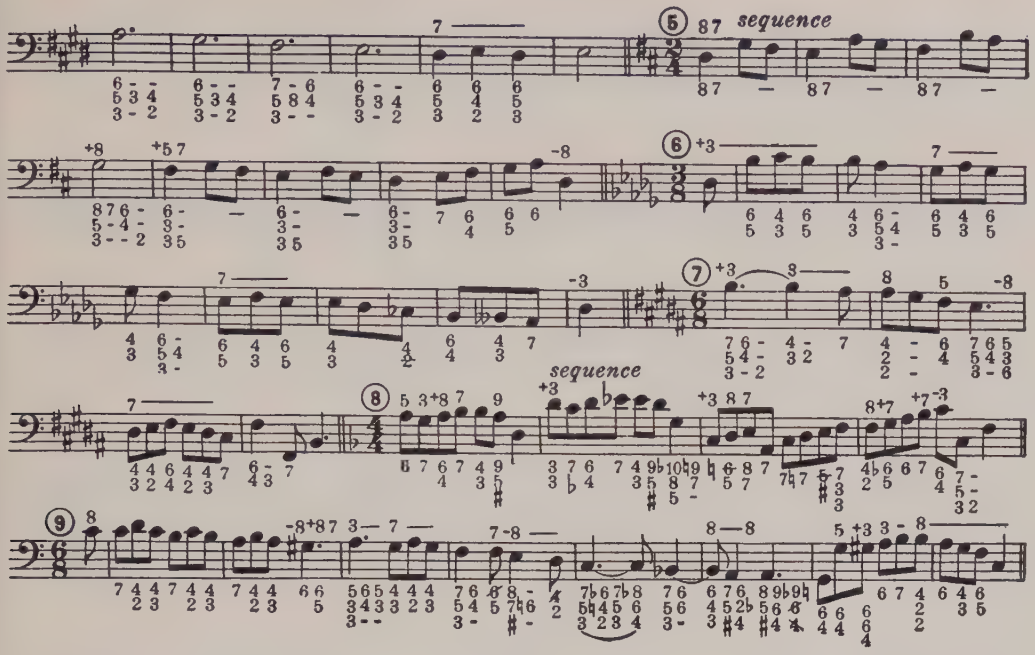
The following summarizes the conventional treatments of all 7th chords with the exception of I_7 and $III_7^\sharp$ of the minor. Analyse with every signature, in turn (except as just noted). Several measures are not possible as IV_7 and VII_7°. A recollection of rules already explained will serve to discover these measures.

Ill. 299



Exercise 161. Besides illustrating the conventional progressions, the following will require irregularities in leading which cannot be anticipated by rule or explanation. They are not without precedents, and "sound" acceptable. Also, some of the successions are Pedal Points, Suspensions, etc., and later will be recognized as such.





LESSON 108

I_7 AND III_7^+ OF MINOR

368. I_7 contains a minor triad and major 7th.
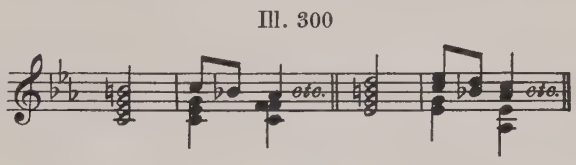
III_7 contains an augmented triad and major 7th.

Both are influenced in their progressions by the presence of the leading-tone as a chord interval and the space of an aug. 5th between two of the tones in each chord.

The tendency of the leading-tone may be offset by chromatically lowering it (melodic scale) and using it as a descending passing-tone.

Ill. 300

In applying this to I_7 and III_7, the same variety of resolutions is possible as previously shown for other chords.



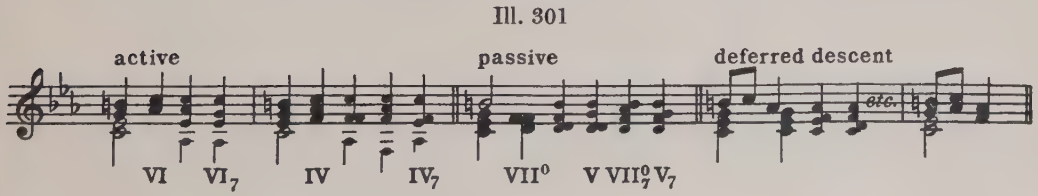
369. As an unaltered chord, I_7 has the following possibilities:

(a) The chord 7th may resolve upwards into the chords VI, VI_7, IV, IV_7 (sometimes II_7).

(b) It may hold into some part of V_9.

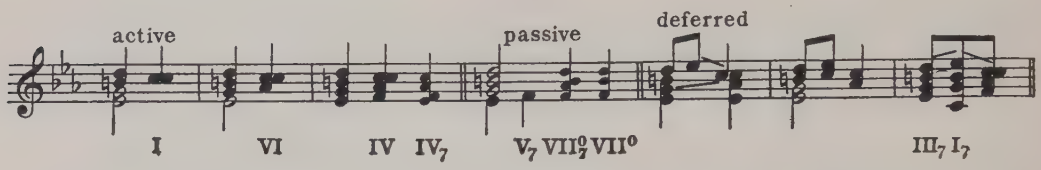
(c) It may ascend to its own root, the latter then descending a 3rd.

Ill. 301



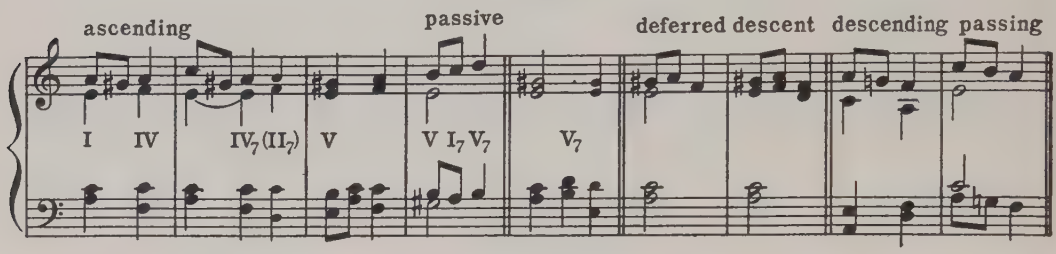
370. III_7 moves into VI, VI_7, IV, IV_7 or I, the chord 7th descending and the 5th ascending—each one degree. The 7th may be held into some part of V_9 or may have the deferred resolutions shown below.

Ill. 302



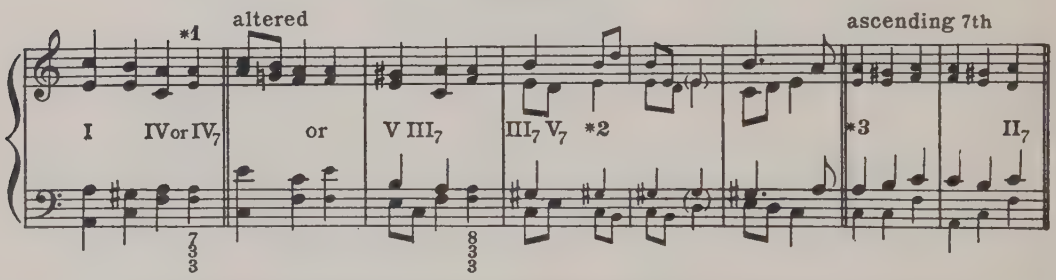
371. These chords are usually preceded by one which permits preparation of the chord 7th or a diatonic approach. However, very little can be done towards making them useful or beautiful.

Ill. 303



(Meas. 2). The skip to the harsh 7th is permissible from another tone of the same chord.

Ill. 304

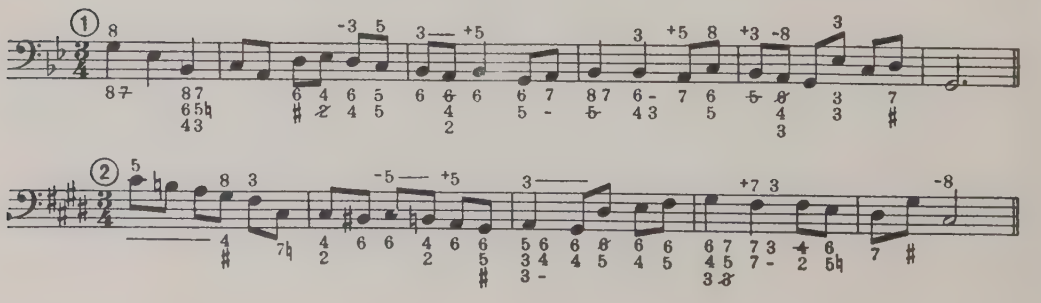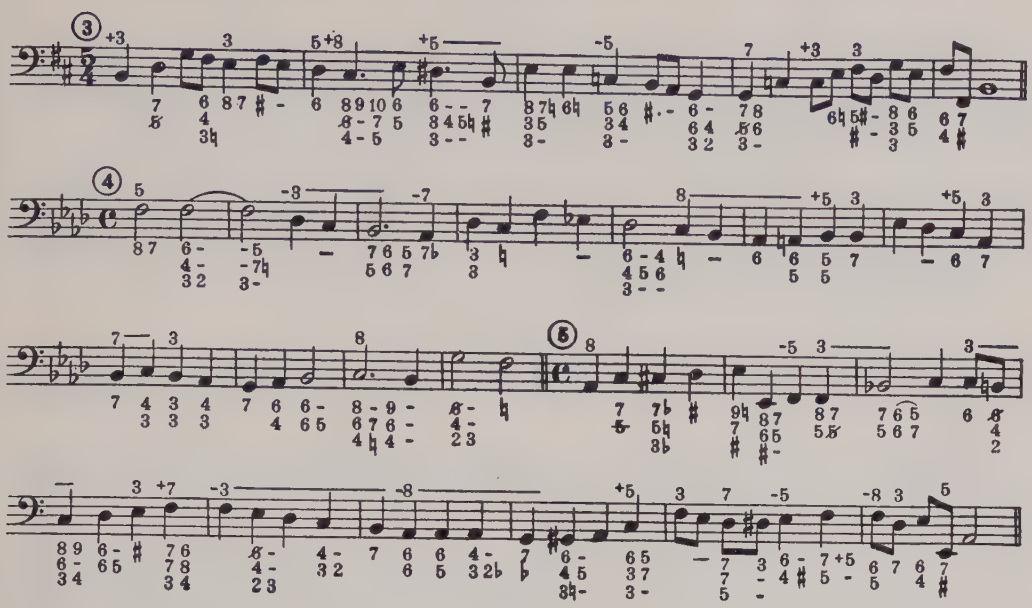


*1 A doubled 3rd in a 7th chord is rare but justified here by the demands of the voice-leading.

*2 The chord 7th of III_7 is taken in the bass as the 5th of V_7. It is a form of the passive resolution.

*3 *Used as an ascending passing-tone or embellishing-tone, the chord 7th may ascend.*

Exercise 162. Some of the following have little to commend them except the effort to crowd as many uses of I_7 and III_7 into as few measures as possible.
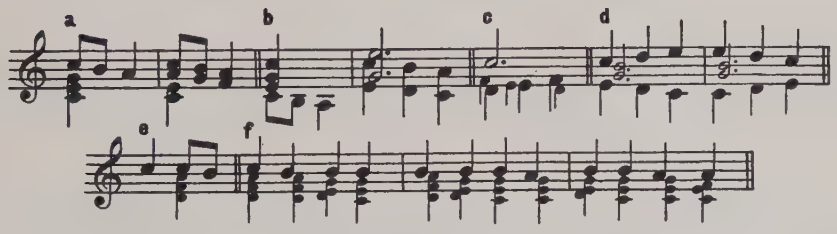




LESSON 109

7th Chords in Melody Harmonization

372. A few melodic patterns which suggest or permit the use of 7th chords are subjoined:

Ill. 305



(a) A descending three-tone pattern; the second tone might be a chord 7th. (In given melodies to be harmonized this is indicated by 8–7—an octave of some chord-tone moving to a 7th from that same tone. The alto voice of meas. 2 may be expressed 6–5—an interval of a 6th above some tone descending to the 5th above it.)

(b) A sustained or repeated soprano will allow for the 8–7 or 6–5 in some other voice.

(c) Same as "b," admitting of the passive resolution.

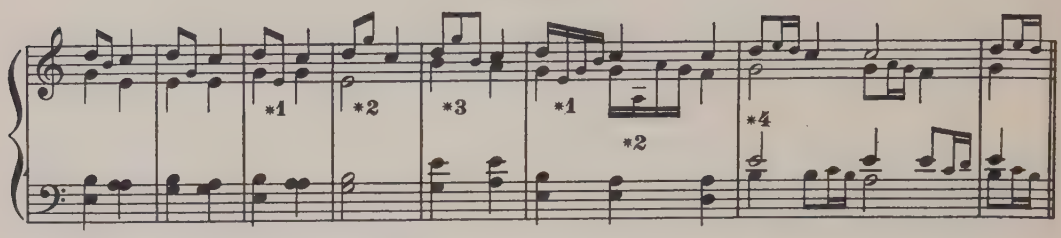
(d) An ascending or descending three-tone scale-pattern admits of a passive resolution—the bass usually taking the sop. tones in reverse order.

(e) A tone repeated (usually into an accent) and then descending one degree suggests that the second of the repeated tones is a chord 7th with an active resolution.

(f) A mixture of repeated and descending tones often admits of successive 7th chords (Ill. 295).

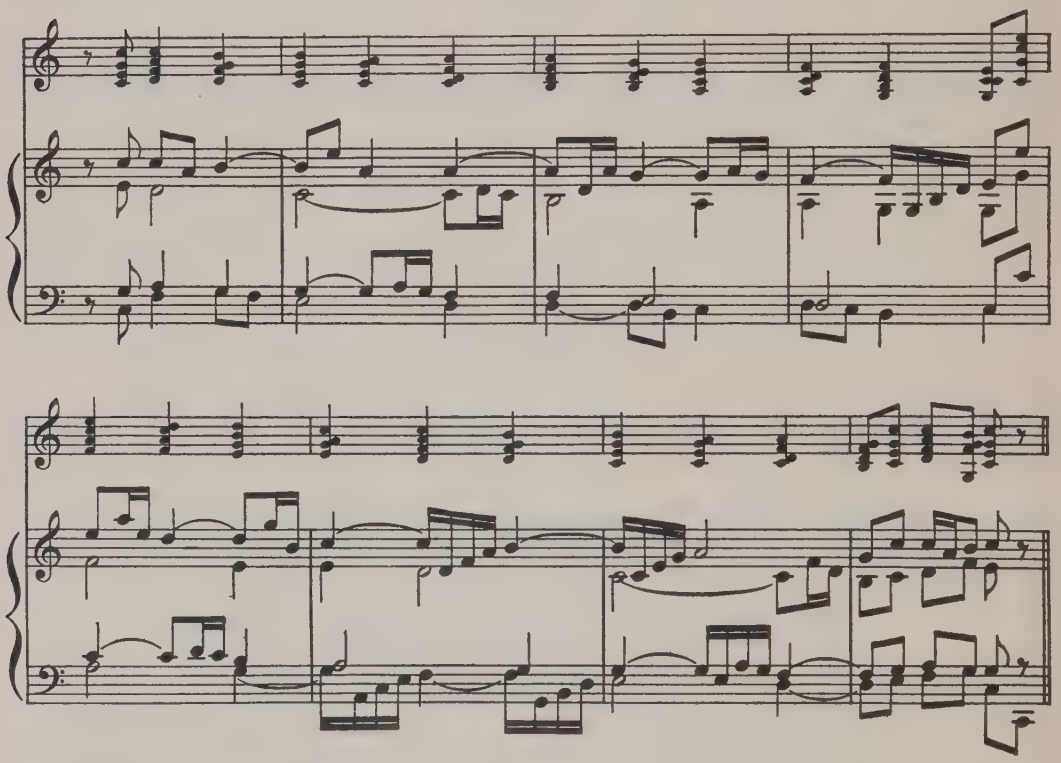
373. Besides the above are the embellished or ornamental resolutions of the chord 7th. These are obtained (as far as the present chord material permits) by interpolating one or more chord-tones between the dissonance and its resolution—the active resolution is deferred.

Ill. 306

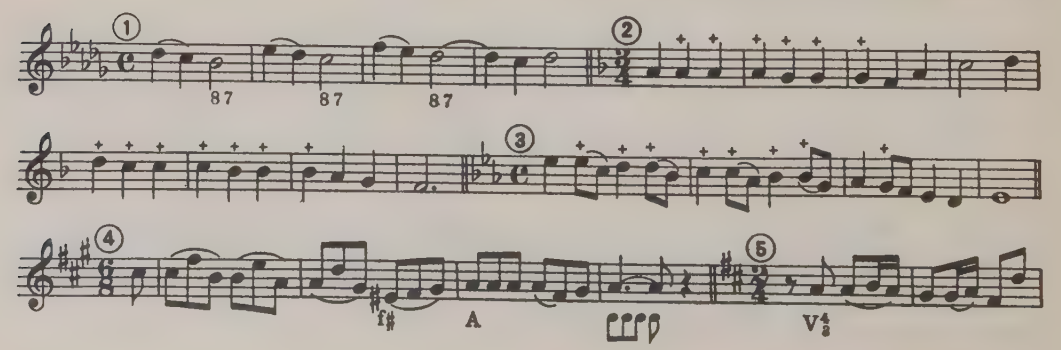


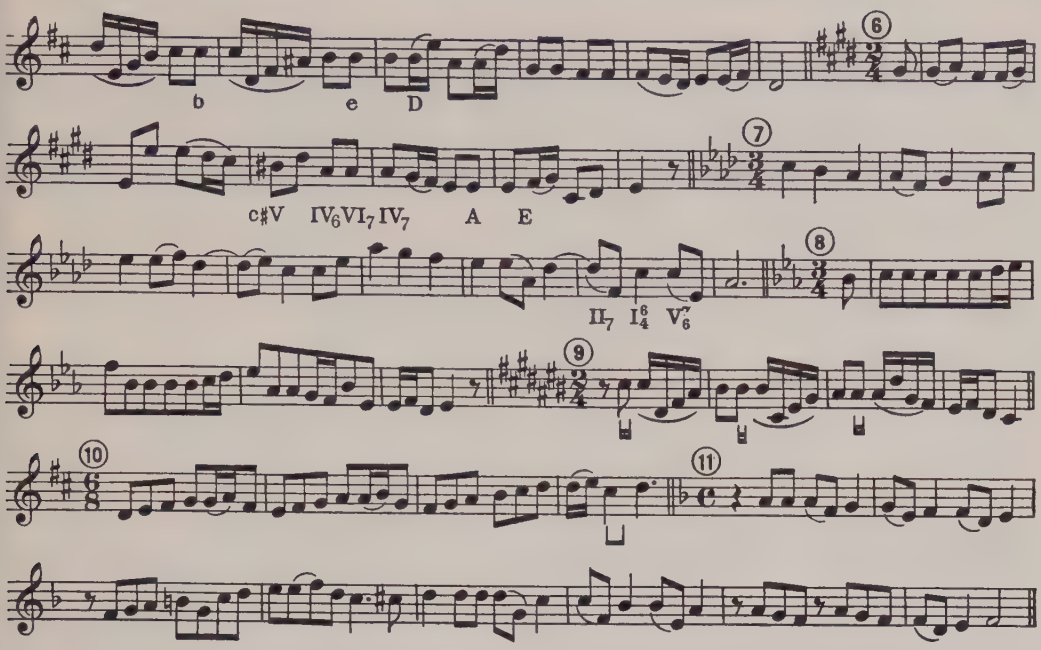
*1 Voices crossed. Correct.
*2 Over an octave between alto and sop. Entirely good.
*3 Doubled leading-tone. Correct.
*4 While best in the soprano, the ornamental resolutions may occur in any voice.

Ill. 307



Exercise 163. Harmonize with as many 7th chords as can be properly used. Refer particularly to the patterns of this lesson.





LESSON 110

Unessential Tones

Review Lesson 52.

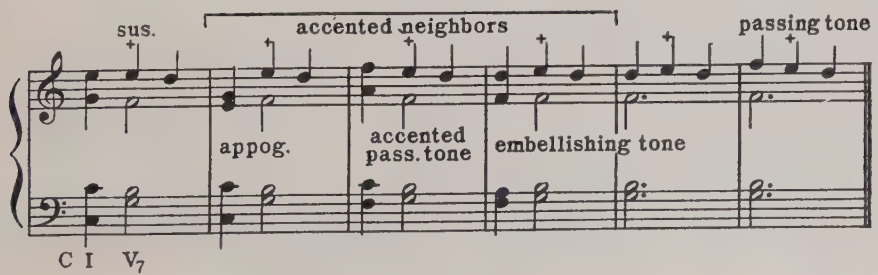
374. An unessential tone is one that, by its dissonant or rhythmic character, does not belong to the chord with which it sounds. Such tones fall into the following classification:—

Accented (Occurring with the chord entrance)	*Suspensions.* *Accented Neighbors.*
Unaccented (Occurring after the chord entrance)	*Passing Tones.* *Embellishing Tones.* *Anticipations.*
Not classified as to accent	*Pedal Points.* *Inverted Pedal Points.*

With the exception of pedal-points and anticipations, an unessential tone is on a degree higher or lower than a legitimate chord interval, acting as a temporary substitute for the latter and delaying its natural entrance. One differs from another only in the manner of approach and rhythmic location—these differences having significance in giving each its name.

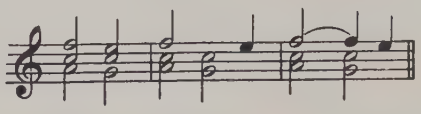
The following illustration shows the comparative differences between them. (Ped. Pts. and Ant. are not included.)

Ill. 308



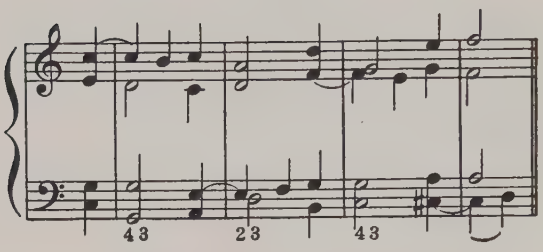
Suspensions

375. A *suspension* is an unessential tone which is held or repeated from an interval of the preceding chord; it is a prepared neighbor. It is a rhythmic retardation of a diatonic progression; i. e., a tone of one chord moving step-wise into a tone of the next chord but delayed in that movement until after the other voices have completed their progression.



376. (a) A suspension may occur in any voice but is less good in the bass.

Ill. 309

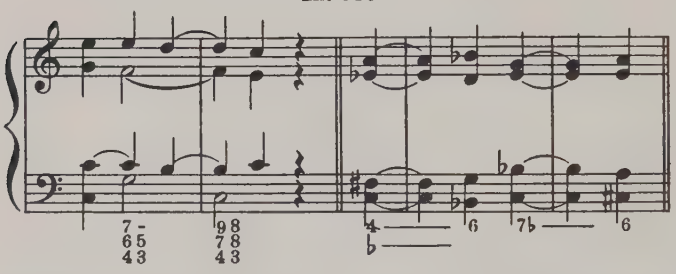


(b) The usual resolution is downward but an ascending progression is possible.

The descent is one scale-degree; the ascent is usually a diatonic semitone.

377. Suspensions may occur in two or three voices simultaneously, moving in parallel thirds or sixths or in contrary motion. Double, or triple suspensions, as they are called, should form well-sounding intervals with each other.

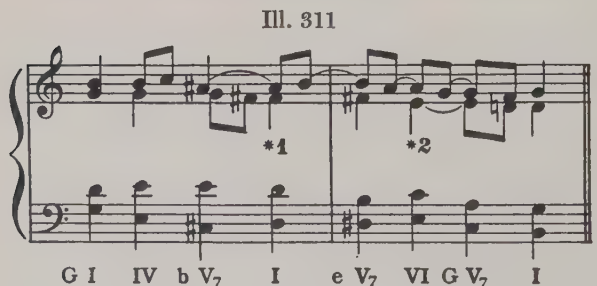
Ill. 310



To suspend all voices is to repeat or syncopate a chord. When this is done so as to create an obvious rhythmic retardation the suspended tones form a *Suspension Chord.*

378. Suspensions sometime appear to be legitimate chord-tones, getting their character as suspensions only from the rhythm, voice-leading or chord connection. At *1, a I is expected because of the preceding V_7; at *2 the sop. "a" is expected to descend into "g." In both cases (as well as throughout the illustration) the second half of each beat impresses as being the intended chord formation. These are called *Harmonic Suspensions.*

Ill. 311



379. (a) All former rules of doubling are in force. As a suspension is a substitute, it must count as the tone for which it substitutes. If the latter is not acceptable as a doubled tone, the effect is even more unacceptable when a substitute acts for one of the doubled tones.

(b) Consecutive 8ves are not remedied by suspension.
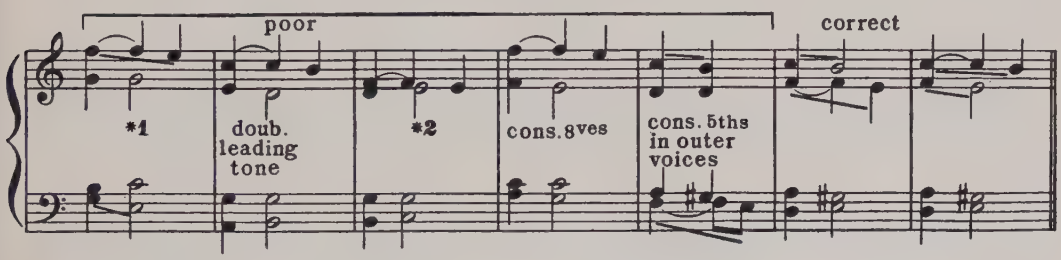
(c) Consecutive 5ths are often made possible by the suspension of one tone, particularly if the suspension itself is sufficiently long to destroy recollection of the first 5th, or in the case of a harmonic suspension, or again if the second 5th belongs to one of the better sounding dissonant chords (V_7–VII°_7–V_9, altered chords, etc.)

(d) Descending 5ths are better than ascending.

(e) Cons. 5ths between sop. and bass are poor under most conditions unless the second one is dim.

(f) Avoid resolving an interval of a 2nd into a unison.

Ill. 312



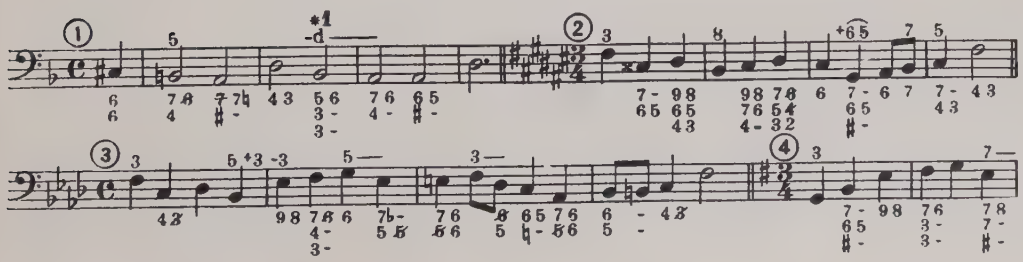
*1 See Par. 314 (*italics*) and Ill. 244. *2 See Par. 379f

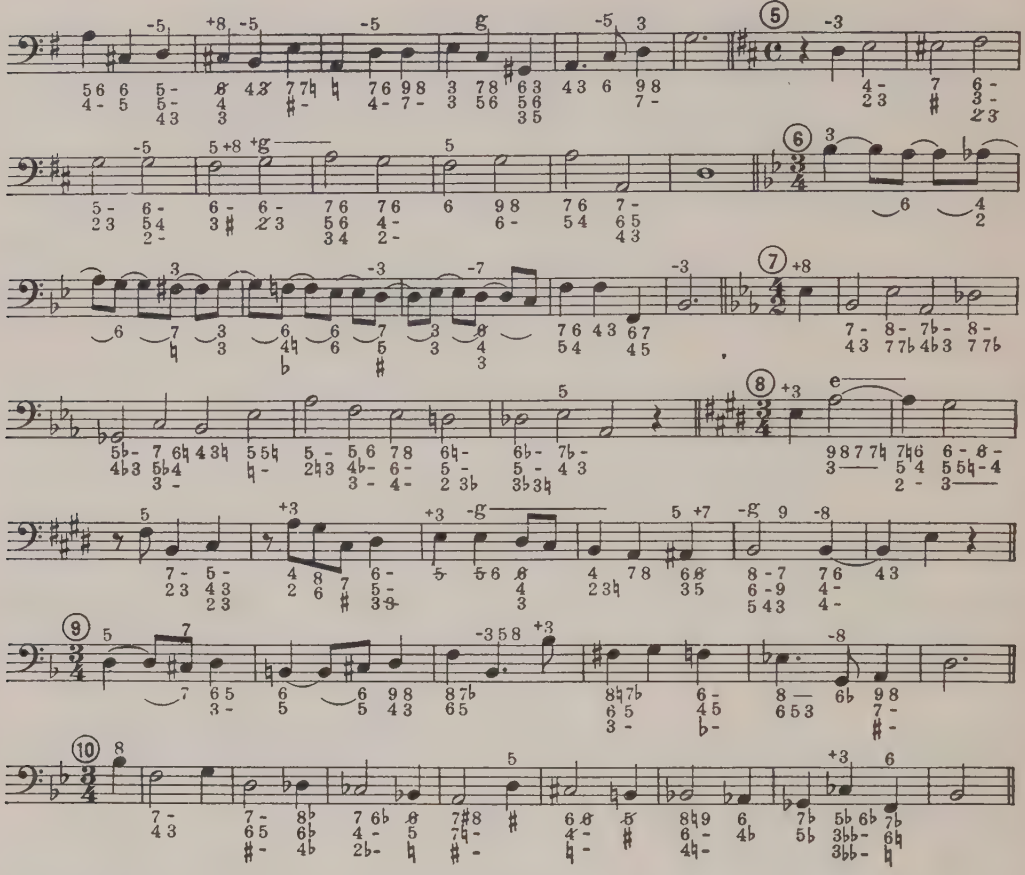
380. A suspension occurs on an accented beat or an accented fraction of a divided beat. It may be tied to its preparation tone or simply re-sounded after the latter. If tied, the preparation tone should not be shorter in value than the suspension.

Exercise 164. A double row of figures under one bass note in these exercises is most likely to indicate a suspension, either actual or harmonic. If the first row is obviously not a chord indication ($\frac{7-}{65}$) the second row shows the completed chord ($\frac{7}{5}$) and the reading from left to right (7–; 6 5) will guide into the correct voice-leading.

A bass suspension is indicated by ⌣ or ⌣ 6, etc., under two bass notes. Write the chord required by the second bass note and place its intervals over the first. (See Ill. 309.)

*1 (below). The letter over the note at this and other places indicates the note to be placed in the sop. The + and — have the same meaning as before a numeral.

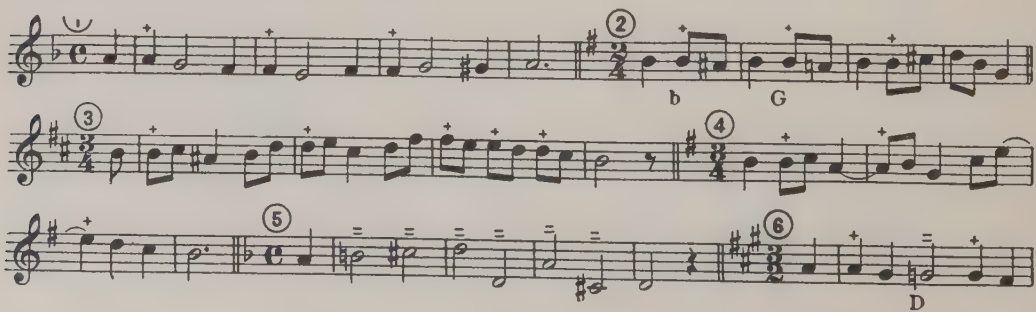


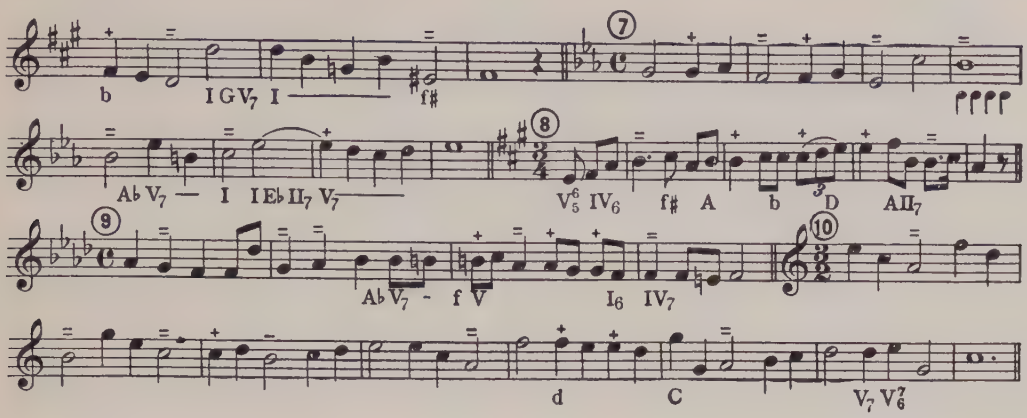


Exercise 165. The + over a melody-note here indicates that that note is to be considered a substitute (suspension) for the one immediately following. A working plan is to write the melody with the suspensions omitted, harmonize it and then replace the suspensions.



The symbol = is here used to suggest a suspension in one of the lower voices. Harmonize according to the above plan and then supply the lower suspensions in voices that move diatonically. Test every progression for its audible effect. Bass, double and triple suspensions are rare





LESSON 111
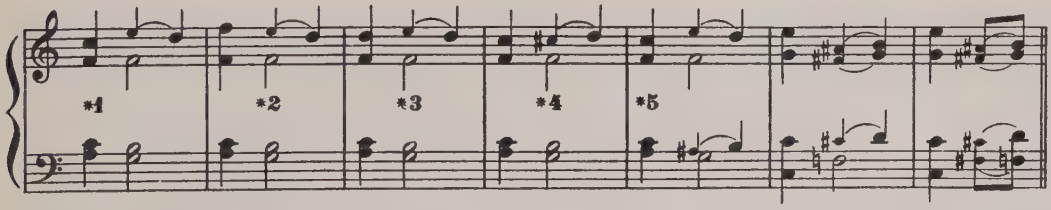
Accented Neighbors

381. An upper or lower neighbor may arbitrarily be substituted for a chord-tone without consideration of the manner of approach. If the neighbor is not prepared, if it is approached diatonically, chromatically or by a leap and occurs with the chord entrance, it is an *Accented Neighbor.*

In the use of this type of substitute there is no restriction except that of musical judgment. If the chord is properly used the substituted neighbors are theoretically correct. However, the audible results will prove a musical acceptability or otherwise.

All paragraphs applying to suspensions, except as they refer to preparation, govern Accented Neighbors as well.

Ill. 313



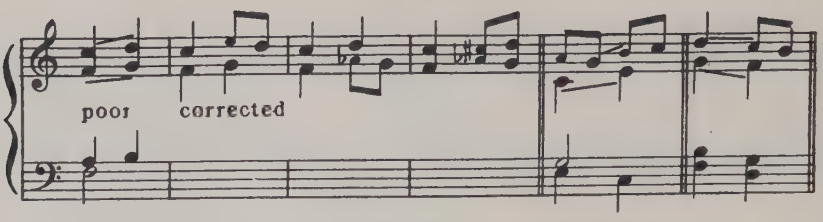
*1 Approached by a leap (*Appoggiatura*).
*2 Approached diatonically in a scale-line (*Passing-tone*).
*3 Returning to the tone that preceded (*Embellishment*).
*4 Chromatic (*Chromatic Passing-tone*).
*5 In two, three and four voices. (See Par. 377.)
Note the F against the F♯ in meas. 6 and the F♯ used as a neighbor of F in the bass of meas. 7.

382. The following illustrates the possibilities of consecutives in connection with the use of accented neighbors. Several rules may be deduced:

(a) *Consecutive 5ths can be corrected by substituting a neighbor for either or sometimes both tones of the second interval.*

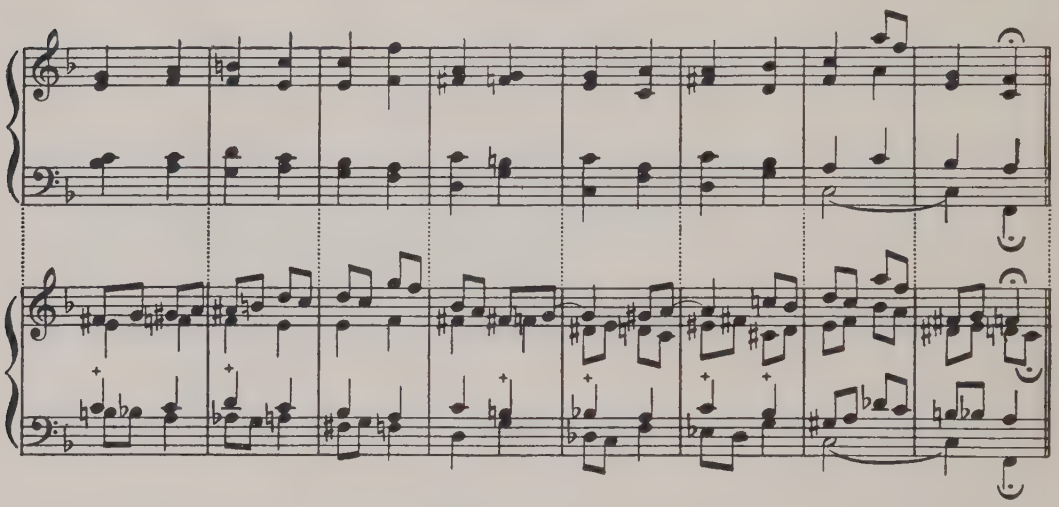
(b) *Consecutive 5ths are correct if either tone of the second fifth is a neighbor.*

Ill. 314

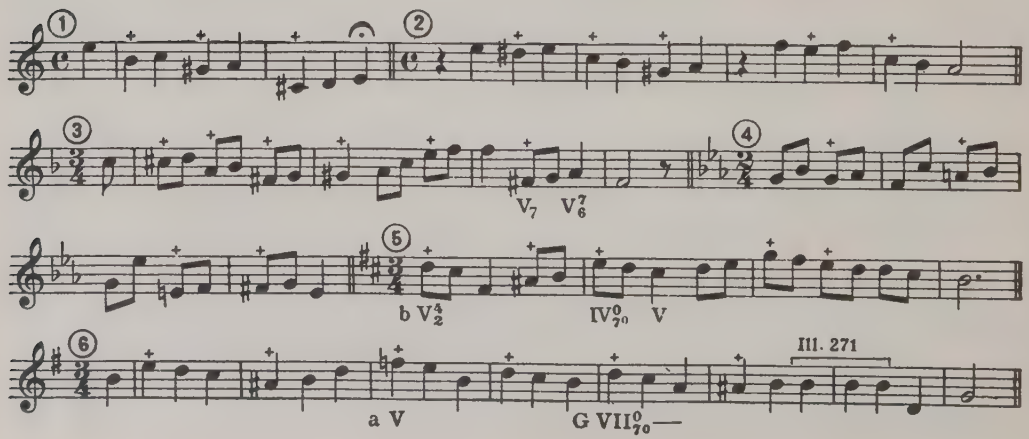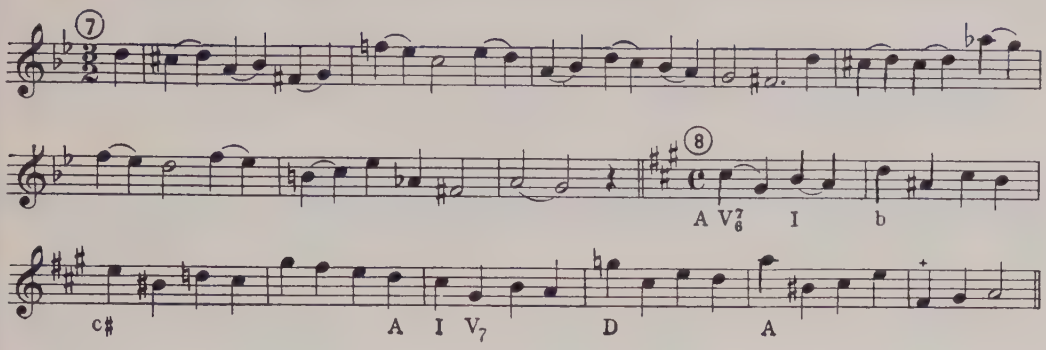


383. The following illustration shows a plain harmonization and under it an embellished form consisting of substituted accented neighbors. Observe the peculiarities at the places marked + and consider them precedents for applied use in the exercises of this and later lessons. However, note that, except in a few instances, the effect is not harsh.

Ill. 315



Exercise 166. Harmonize according to the working plan shown in Ex. 165—first without the neighbors and then replacing them. The symbol + and slurs are suggestive, not arbitrary. These and the key indications may be ignored.
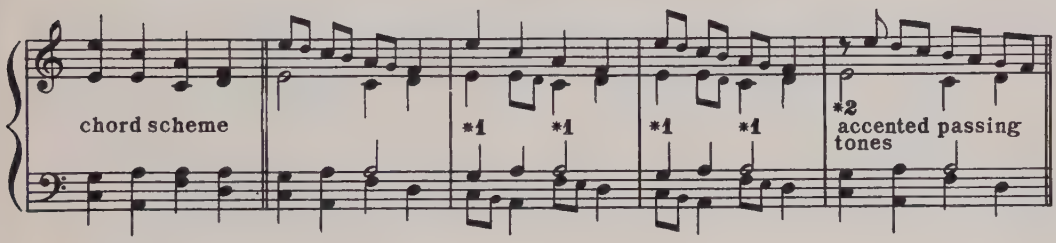




LESSON 112

Passing Tones

384. A melodic progression of a whole-step or more in any voice may have the interval filled in diatonically or chromatically. Those of the supplied tones which do not belong to the prevailing harmony are called *Passing Tones.* They are either:

Accented or *Unaccented.*
Diatonic or *Chromatic.*

Ill. 316

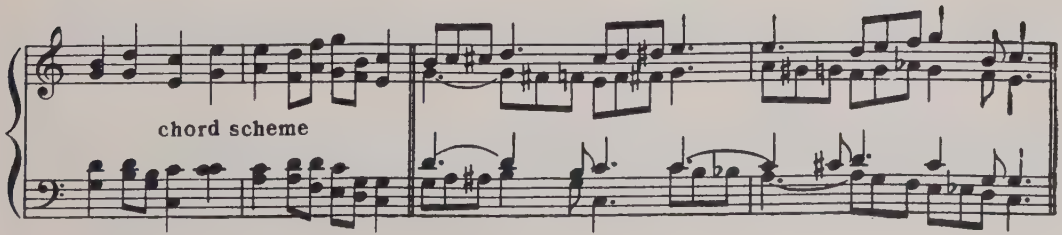


*1 Here the passing-tones form possible chords. (Compare with Ill. 311.)
*2 Accented passing-tones have been classified in the preceding lesson.
Meas. 4—Double passing-tones should move in parallel 3rds or 6ths or in contrary motion, forming well-sounding intervals with each other.

385. Chromatic passing-tones have been used in many of the preceding lessons as altered chord-tones. They may also be foreign to the chord structure, conforming usually to the notation of the chromatic scale and sounding best when ascending.
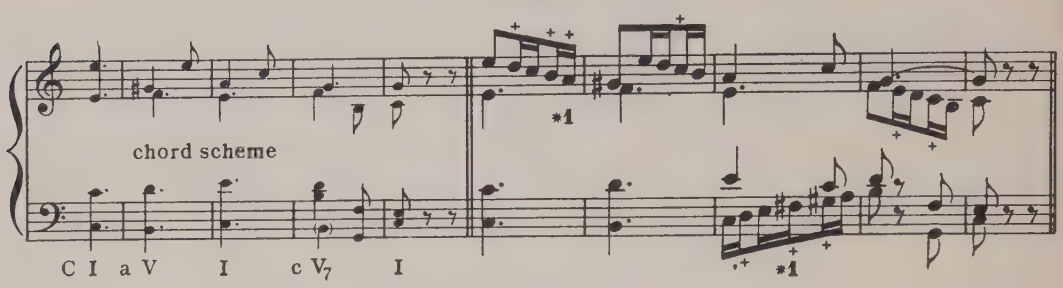
Analyse the following thoroughly:

Ill. 317



Filling in larger intervals sometimes causes the use of successive passing-tones, as at *1 below.

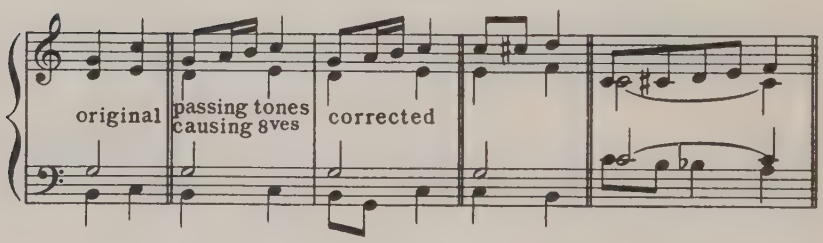
Ill. 318



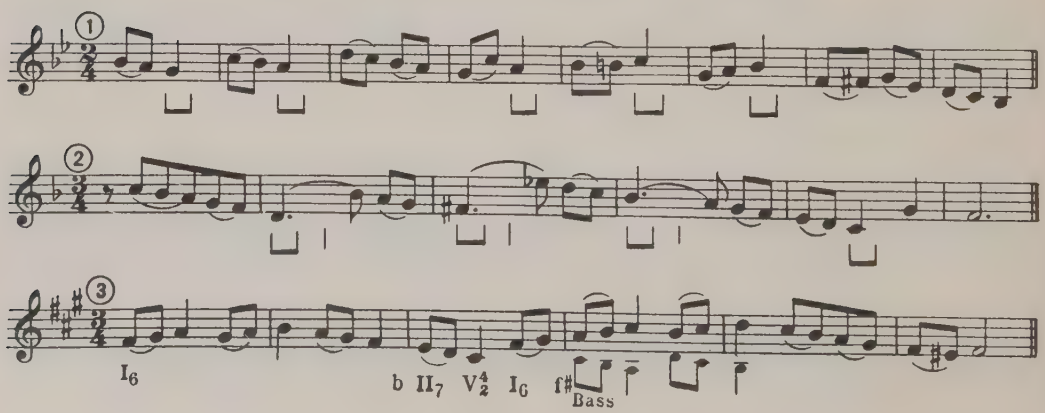
386. (a) Review Par. 382 in reference to cons. 5ths. There is a danger of cons. 8ves resulting from the use of passing-tones, as shown below. Note the correction in Meas. 3.

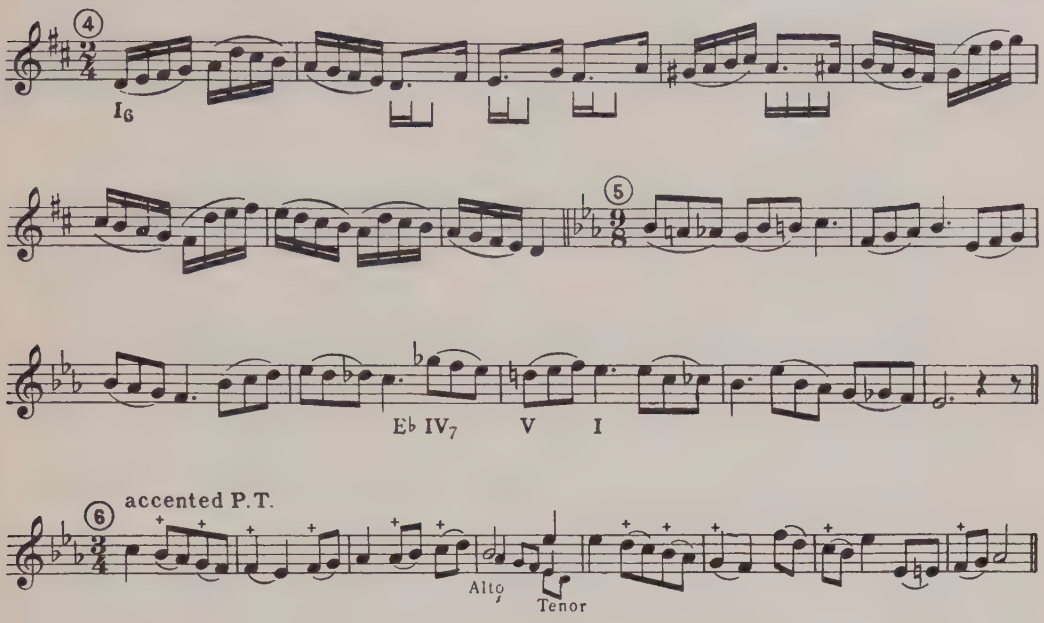
(b) A tone and its chromatic alteration sounding simultaneously is of frequent occurrence but the difficulty of judging the musical merit of each individual case makes a "do not" rule easier to follow than a "may, if" one.

Ill. 319



Exercise 167. Harmonize. The slurs indicate the possibility of one chord (in the one or several bass positions) for the group. Follow the working plan suggested for Ex. 165.





LESSON 113

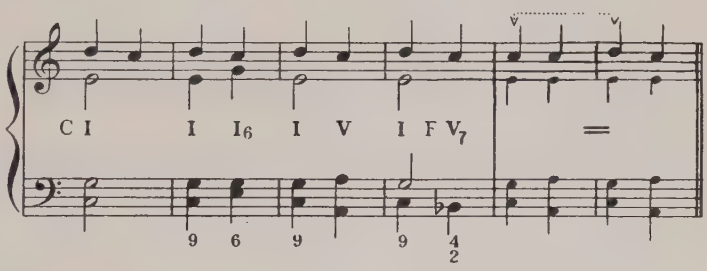
Irregular Treatment of Neighbors

387. An accented neighbor is subject to a variety of irregular resolutions which correlate with the irregular treatments of a seventh chord.

(a) *New Chord or Position with Resolving Tone.*

The resolution tone may be harmonized with a chord or position different from the one heard with the substitute tone. In effect, this is simply the substitution of a neighbor for one of two repeated tones.
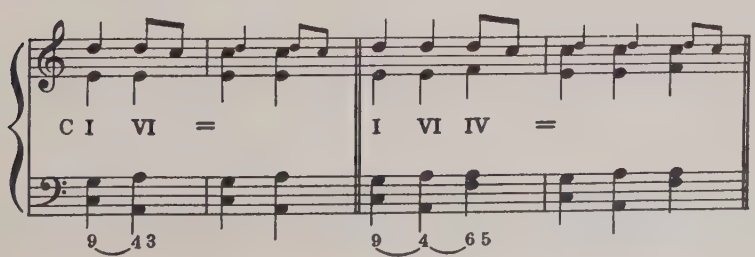
Ill. 320



(b) *Prolonged Suspension.*

A substitute may be carried through several chord-changes, provided each chord contains the tone substituted for. In other words, a tone common to successive chords and kept in one voice may be displaced by a neighbor which ultimately should resolve.
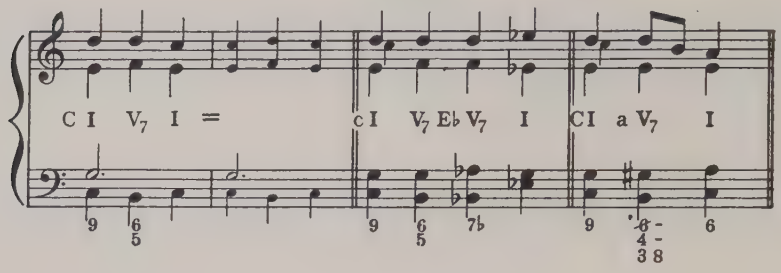
Ill. 321



(c) *Passive Resolution.*

A substitute may be held or repeated into a chord of which it is a legitimate interval. It usually then resolves to the tone for which it originally substituted, but may move as its place in the new chord directs or permits.

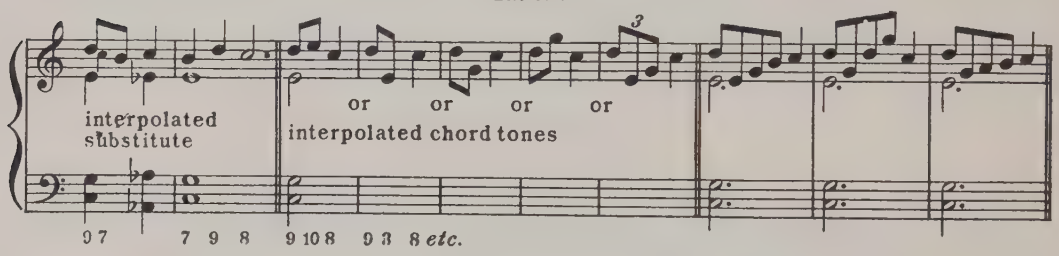
Ill. 322



(d) *Interpolated Tones.*

Between a substitute and its resolution may be interpolated the other substitute or any tone or tones of the prevailing chord.

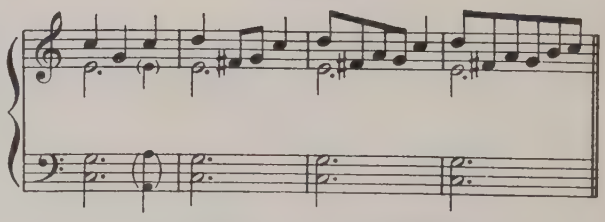
Ill. 323



(e) *Successive Neighbors.*

A substitute of one chord-tone may skip to the substitute of another chord-tone. The resolving tones of both must then be heard successively. Par. 387a may be applied to either or both of these neighbors.

Ill. 324



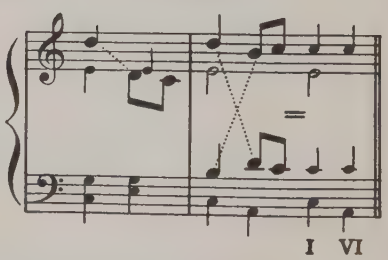
Ill. 325

(f) *Transferred Resolution.*

The substitute may be transferred to another voice and then resolved.

(g) *Exchange of Neighbors.*

If substitutes are used in several voices simultaneously, they may exchange places with each other, resolving where last heard.
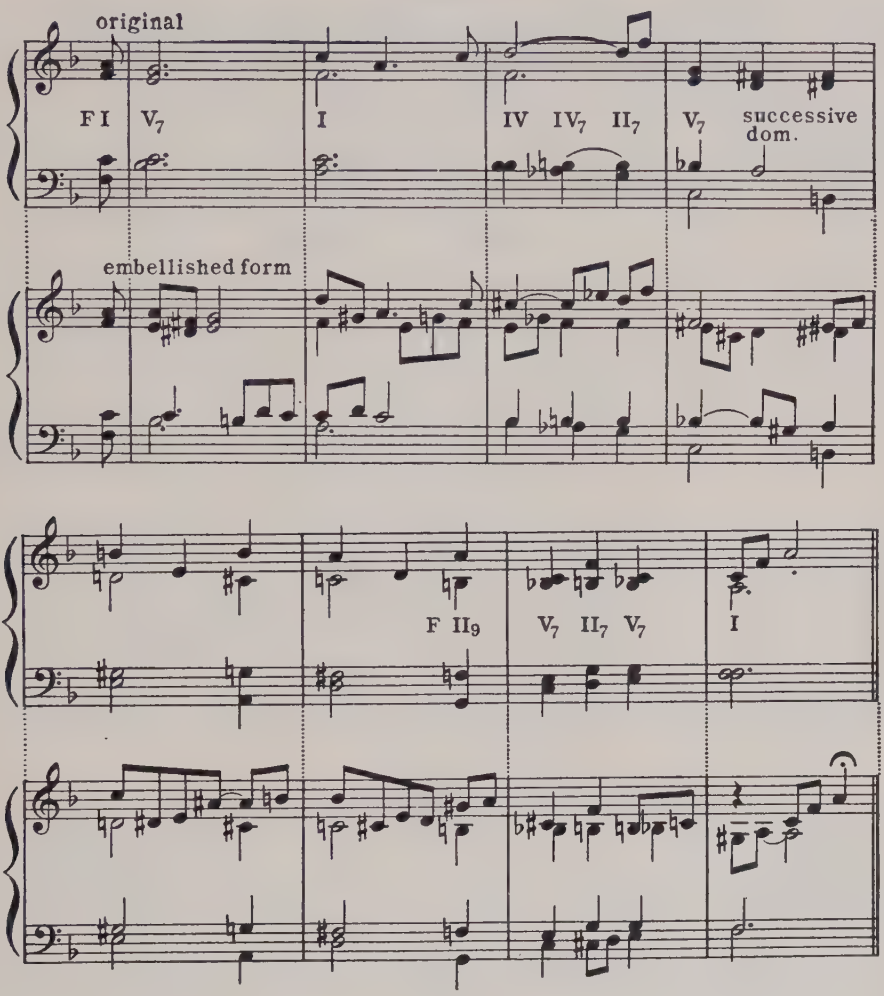


388. These irregularities may be combined in a variety of ways but mature judgment and much experience is necessary to prevent a total destruction of euphony by indiscriminate use. It will be safer to limit application to those of Par. 387, (a) and (d).

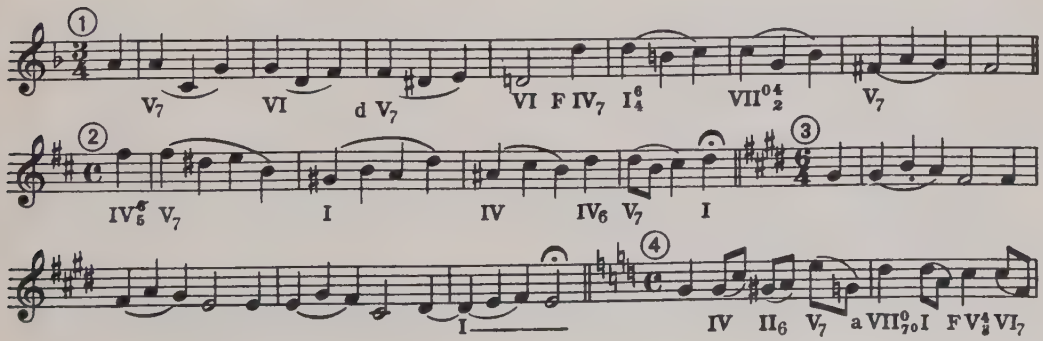
More particularly, triads, their inversions and the parts of V_9 lend themselves better to irregularities, and any harmonic scheme to be subjected to embellishment should be simple.

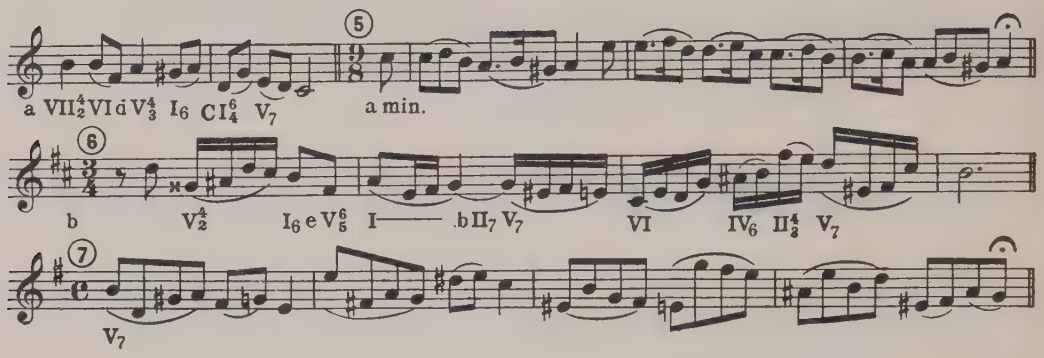
The following is an effort to apply the principles of this lesson. It is possibly too complex for emulation. Analyse it carefully and indicate thus—(a), (b), etc.—which sections of Par. 387 are illustrated.

Ill. 326



Exercise 168. (a) Use one chord for each slurred group. The bass position may have to be changed but the chord remains the same. Refer to the lesson illustrations for patterns.





(b) The problem of embellishing melodies and simple chord connections has been touched upon. This subject may now be amplified to any extent warranted by time available or the interest, seriousness and ambition of the pupil. Use chorales, hymns or model exercises in this text. Embellish them as follows:

1. The neighbors in one particular voice throughout.
2. In two, three, finally four voices alternately.
3. In several voices simultaneously.

In turn, illustrate suspensions, passing-tones, accented neighbors, the same with irregular resolutions, anticipations—finally selecting the ornamentation at will, justifying the selection by the musical result.

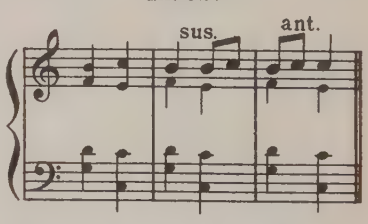
LESSON 114

Anticipations

389. Any natural voice-leading may be delayed (Suspensions-Syncopations) or hurried (Anticipations).

An *Anticipation* is an expected tone of one chord heard on the weak part of the preceding chord. It is a chord member brought in before the natural rhythmic pulsation warrants its appearance.

Ill. 327

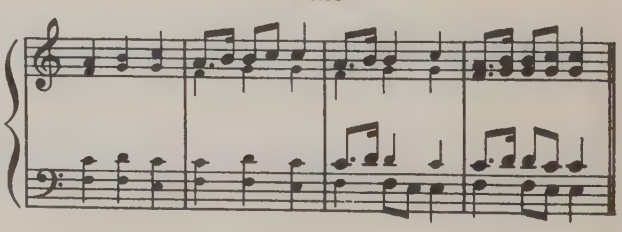


It does not matter whether or not it is foreign to the chord with which it is heard. It simply hurries a normal voice movement and is a rhythmic rather than a harmonic detail.

390. Anticipations may occur in any or all voices. In the latter case they are called *Anticipation Chords.*

In value they should be no longer than the tone immediately preceding.

Ill. 328

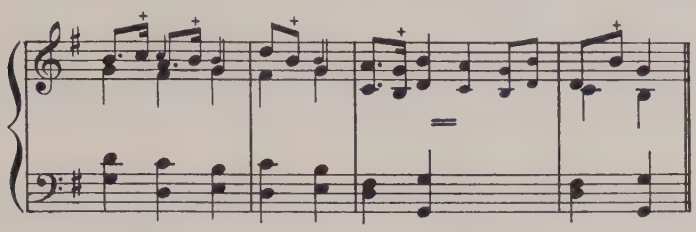


391. They are of two classes, Regular and Irregular.

A Reg. Ant. repeats itself into the beat it anticipates (as in Ill. 328).

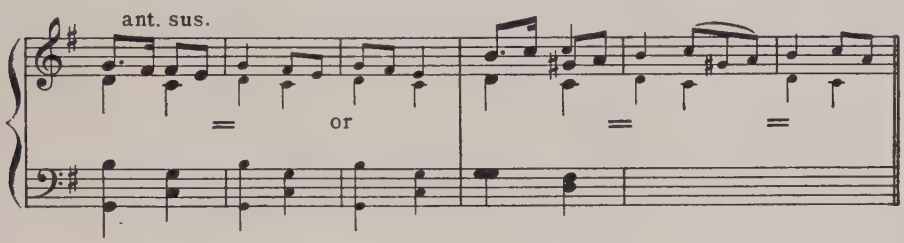
An Irreg. Ant. skips to some other tone of the chord to which it belongs. (Ill. 329.)

Ill. 329



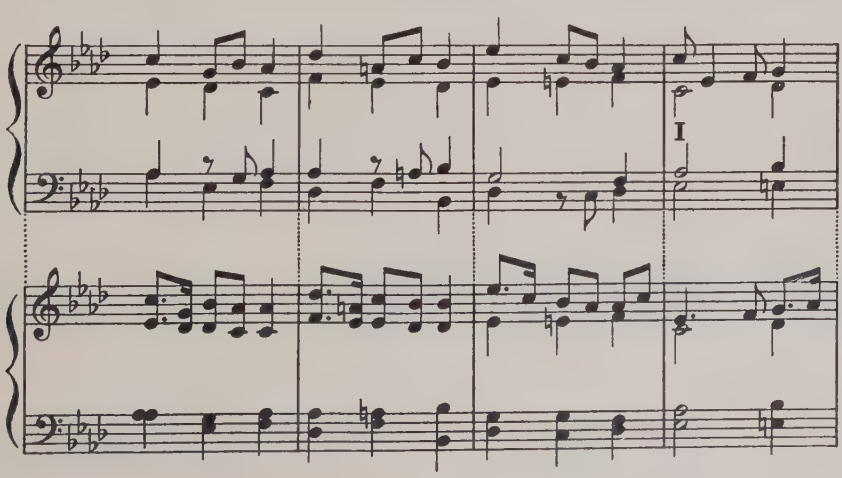
392. An Anticipation may be used to prepare a Suspension or may skip to a neighbor of the other chord-tone allowed by Par. 387e. These uses are extremely irregular and safe only in experienced hands.

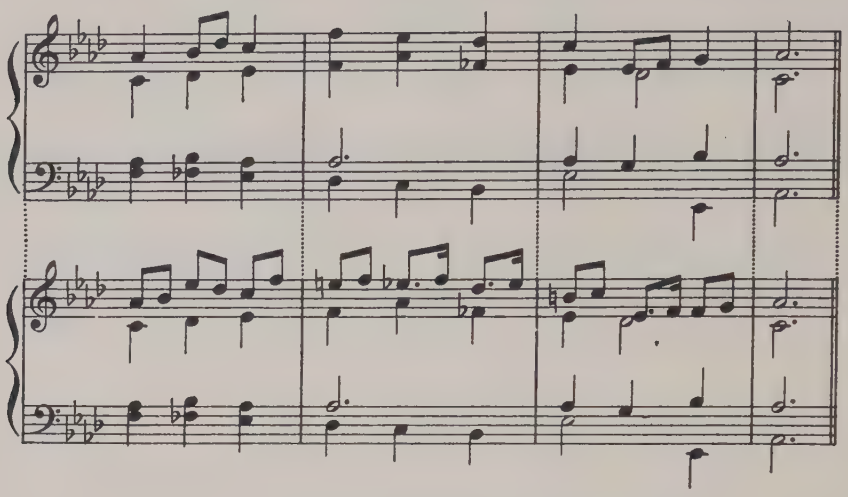
Ill. 330



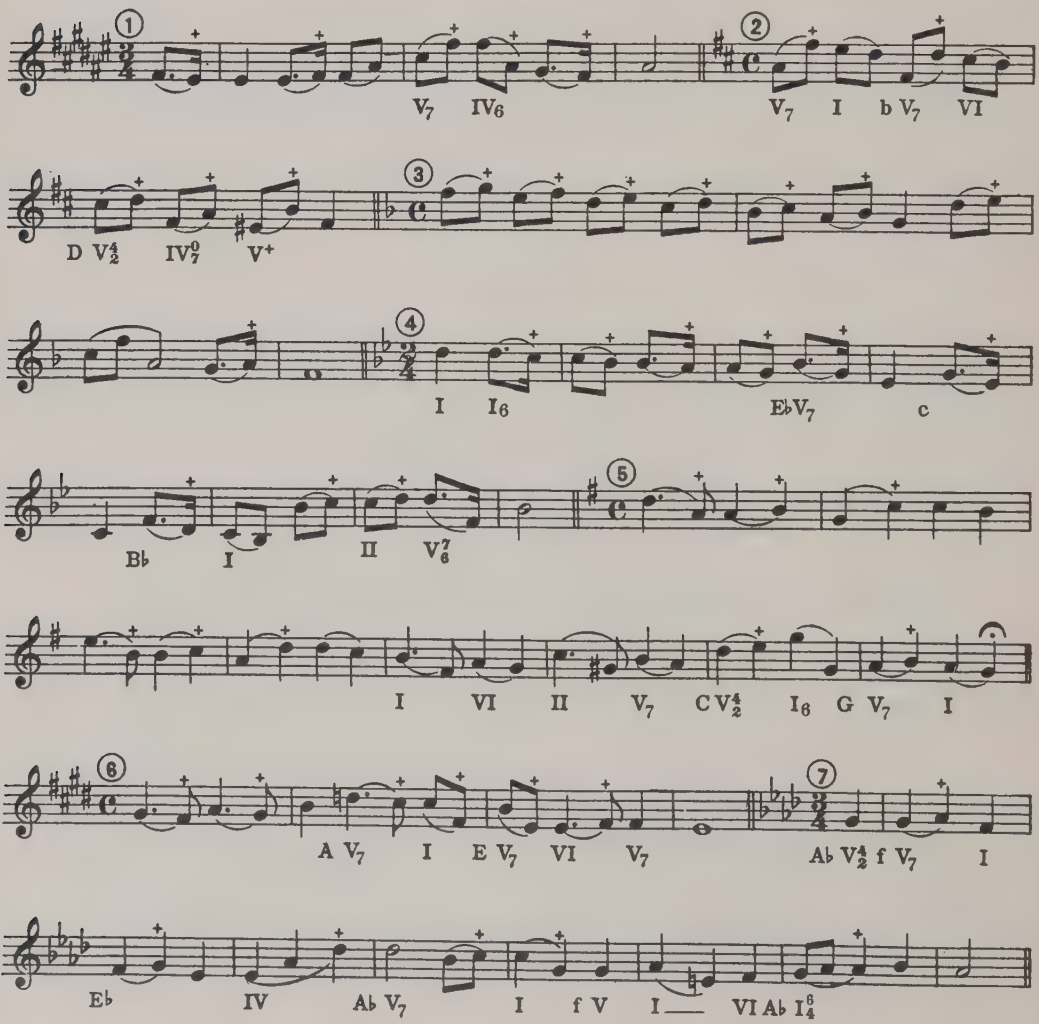
The following shows a simple harmonization and another version of the same embellished by anticipations. Compare the two and indicate the paragraphs illustrated in the lower version.

Ill. 331





Exercise 169. The slurs, as usual, indicate one chord. The symbol + requires the note below it to be an Anticipation.



LESSON 115

Pedal Point

393. A *Pedal Point* (or *Organ Point*) is a tone in the lowest voice, held or repeated through changing harmonies, some of which do not contain it as a chord interval. It usually is a scale Dom. or Tonic, occasionally a Mediant, seldom any other. In other words, it is usually an inactive scale-step.

It may be a sustained tone, a repeated tone, a tone recurring at intervals, a tone transferred up and down through several registers. It may occur in several voices simultaneously.

The chord formations sounding against it may stay in one key or travel through related keys and even more distant ones that happen to contain the sustained tone as a scale-step. However, a rational need of occasional consonance makes it essential that, at not too great intervals, chords appear which contain the Pedal tone. The first and last chords must contain it.

394. It is named *Tonic Pedal, Dom. Pedal,* etc., and more specifically:
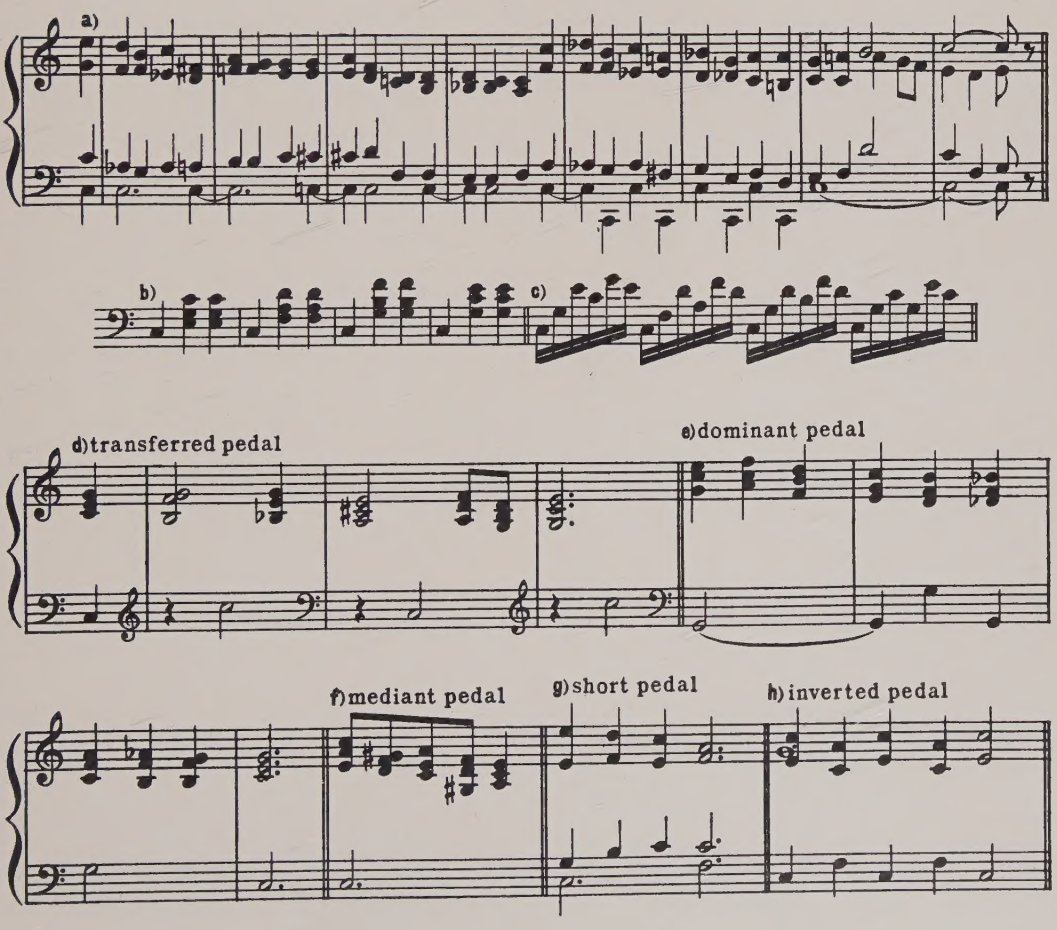
(a) *Short Pedal Point* if it lasts through but three chords, the middle one being not harmonic with it.

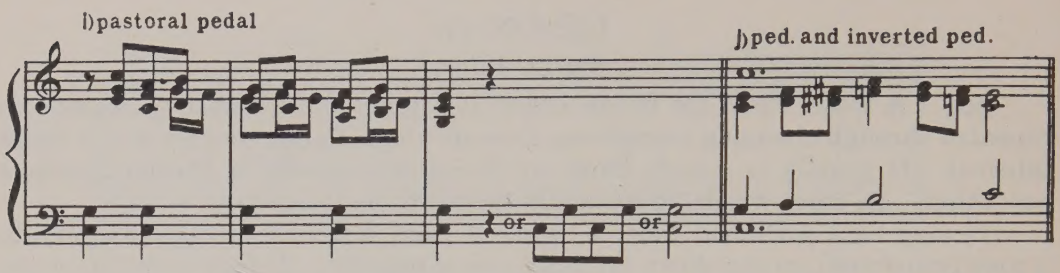
(b) *Pastoral Pedal Point* if it consists of both Tonic and Dom.

(c) *Inverted Pedal Point* if in any but the lowest voice.

Illustrations of the various types follow:

Ill. 332





In transcribing to four parts (as outlined on page 71) only bass pedals are to be retained. Inverted pedals are to be eliminated and a leading of chord intervals substituted.

Exercise 170. Write original exercises (4, 6, 8 measures), each containing a different kind of Pedal Point.